March 1, 1930 Textile World Vol. LXXVII, No. 9

Published every Saturday by Bragdon, Lord & Nagle Company,
Division of McGraw-Hill Publishing Company, Inc., New York

Editor: Douglas G. Woolf

Budgeting Textile Inventories

THE idea of budgetary control is no longer formidable nor academic to the average citizen. It is accepted as a simple, practical method—employed by our government, by businesses large and small, and by housewives.

Its application to the inventory problem of a textile manufacturer may seem to involve difficulties—mostly because of the remoteness of the mill from the ultimate consumer. In an article in this issue is cited an example of one company which finds such control entirely feasible. The primary prerequisites seem to be the enthusiastic cooperation of the entire personnel and a systematic "follow through" which will keep the system flexible.

Its advantages are obvious.

•

Textile mill stocks are too often used as a reservoir for surplus production and too seldom manipulated with a view to exactly meeting customer requirements. The result is harmful and needless stock fluctuations instead of planned and needed fluctuations. A further result is unplanned and erratic production as contrasted to production geared to demand.

Stocks have an influence far beyond their market. Erratic stocks cause erratic production and erratic production causes erratic raw material markets. Stocks in every step from raw material to consumer have a bearing on every other step.

One of the reasons advanced for the policy of continuing to produce stock after demand has been met, is the plea that otherwise labor will suffer. As a matter of fact, such a policy does labor considerably more harm than good. One of two results is almost inevitable. Financial affairs may be complicated by a superabundance of stock and drastic curtailment must take place anyway; or the surplus stock will be sacrificed on the market. In the first instance the alternate scarcity and glut in the labor market will cause disturbances; a fluctuating income is not conducive to contentment. In the second instance the mill will take a loss or make a negligible profit; and one of the cornerstones of the universally desired higher wages is profitable mill operation.

Mills may state that they are forced to run full to break even at present price levels. Obviously they are confusing cause and effect. Running full to save a dollar in overhead results too often in losing two dollars in market value—and the overhead dollar is usually lost in later forced curtailment.

•

Naturally, the more generally the principle of budgeted inventory control is applied, the more effective will it be in steadying the market in any one type of material, and in improving the textile situation as a whole. Nevertheless, this is one of those jobs which can be started by an individual in his own mill—and which will at once yield tangible dividends.

Cotton Industry Leaders Recommend Shortening Work-Week

[Ask 55-Hour Week, Day Shift, And 50-Hour Week, at Night]

IN CONFERENCES conducted by Walker D. Hines, chairman, and George A. Sloan, president, of The Cotton-Textile Institute, a number of important cotton manufacturers in southern and New England States have been considering for some time ways and means for diminishing the present degree of irregular employment in the industry, and as a result a recommendation has been made by these mill executives to promote that object. The recommendation contemplates a voluntary adjustment on the part of mills generally so that the day shift shall not exceed 55 hours per week and the night shift shall not exceed 50 hours per week.

The effect of these schedules in those sections where night running is general will be to reduce the length of the regular night shift by not less than 5 hours per week in most cases and in some cases by 10 hours per week. In addition, both on night and day shifts, extra running time outside of the regular shift will be eliminated and in the comparatively few cases where the day shift now exceeds 55 hours there will be a reduction to not more than 55 hours.

For some years past the mills have actually been running a lower total basis of employment than is indicated by these schedules but under fluctuating methods of operation which have led to much unnecessary irregularity of employment and discontent on the part of employes. The proposed plan will tend to secure a greater regularity of employment.

Mill executives recommending this plan to the industry represent some of the most important mill interests in the United States and are as follows:

Wm. D. Anderson, Bibb Mfg. Co., Macon, Ga.; Harry L. Bailey, Wellington Sears & Co., New York; Lincoln Baylies, Amory, Browne & Co., Boston, Mass.; F. Marshall Beattie, Piedmont Mfg. Co., Piedmont, S. C.; C. F. Broughton, Wamsutta Mills, New Bedford, Mass.; C. E. Buxton, B. B. & R. Knight Corp., Providence, R. I.; Cason J. Callaway, Callaway Mills, La Grange, Ga.; W. B. Cole, Hannah Pickett Mills No. 1, Rockingham, N. C.; Donald Comer, Avondale Mills, Birmingham, Ala.; Julius W. Cone, Revolution Cotton Mills, Greensboro, N. C.; E. G. Chace, Berkshire Fine Spinning Associates, Adams, Mass.; A. M. Dixon, Dixon Mills, Gastonia, N. C.; B. B. Gossett, Chadwick-Hoskins Co., Charlotte, N. C.; Geo. S. Harris, Exposition Cotton Mills, Atlanta, Ga.; Robert E. Henry, Dunean Mills, Greenville, S. C.; John A. Law, Saxon Mills, Spartanburg, S. C.; T. M. Marchant, Victor-Monaghan Co., Greenville, S. C.; V. M. Montgomery, Pacolet Mfg. Co., Spartanburg, S. C.; W. S. Nicholson, Union-Buffalo Mills, Union, S. C.; J. E. Sirrine, Greenville, S. C.; Geo. M. Wright, Republic Cotton Mills, Great Falls, S. C.; Gerrish H. Milliken, Deering, Milliken & Co., New York; William H. Baldwin, Woodward, Baldwin & Co., New York; G. O. Hunter, Hunter Mfg. & Commission Co., New York.

Since these recommendations were made, a very large proportion of the narrow sheetings mills, aggregating, it is estimated, about 43,000 looms, have indicated that their maximum hours of labor will not exceed 55 hours per week for the day shift and 50 hours per week for the night shift and that both as to day and night shifts, all over-time, including noon-hour operations, will be eliminated. It is anticipated that many other narrow sheetings mills will do likewise. The matter will be carried forward with other branches of the industry as well.

In the opinion of leading mill executives who have given this matter considerable thought and study it is believed that the policy recommended is a sound one for the cotton textile industry to follow in that it will promote greater regularity of work, the shortening of hours in the manner above indicated, and greater contentment among mill employes.

•

[EDITOR'S NOTE: The above important announcement was made by The Cotton-Textile Institute just as this issue of TEXTILE WORLD was going to press. It represents, in our opinion, a progressive step backed by the prestige of the institute and of a group of influential leaders. This support augurs well for the general adoption of the recommendation. The action is particularly significant in that it apparently reflects a prompt and decisive "follow-through" on the program initiated by the industry at the recent conference with President Hoover in Washington.]

The Week in Textiles

Outlook . . .

RAW cotton establishes new low and looks cheap to many, but no strong bullish factor is in evidence as yet. . . . . Little action in cotton goods market and not much expected for a time. . . . . Wool goods still draggy. . . . . Hosiery market looks a little better. . . . . Raw silk none too steady.

Coordinating Council . . .

IN THE belief that the spirit of cooperation so evident in the various textile groups should be extended to include cooperation between the one hundred or more organizations, the New York Board of Trade has advanced plan for a council comprising the presidents of various textile associations. . . . . The latter are classified in three groups, producers and primary distributors, secondary distributors, and cutters. . . . . The present plan is to organize the first group, consisting of millmen, commission merchants, converters, finishers and brokers. . . . . When this group is functioning properly the second group would be assimilated, and later the third. . . . . The plan seems practical and constructive.

Plan Hosiery Division S.T.A. . . .

EXECUTIVES, managers, superintendents and overseers of hosiery mills in the Carolinas and Virginia have been invited to attend meeting at Hotel Sheraton, Highpoint, N. C., 10:30 a.m., Wednesday, March 5, when plans for the organization of a hosiery division of the Southern Textile Association will be formulated. . . . . Large number of hosiery mill officials have already signified their intention of attending the meeting, according to Walter C. Taylor, secretary-treasurer of the association.

Mohawk Valley Conditions . . .

TEXTILE conditions in central New York State were outlined at inquiry into freight rates conducted by Public Service Commission. . . . . Ralph M. Jones, vice-president and general manager, Utica Knitting Mills, representing about 40 textile mills stated that Mohawk Valley mills were having a struggle as it was, and urged a lower, not a higher, freight rate. . . . . Mr. Jones also spoke of the advantages enjoyed by southern mills, and cited the moving or disbanding of over 30 mills in the State within the last few years.

Silk Machine Activity . . .

THE December decline in broad silk loom activity amounted to 2.9% as compared with November, but the month was still 5.6% above 1928, according to Silk Association of America. . . . . Narrow looms showed decrease of 3.3% as compared with November and spindles 1.5%. . . . . For year 1929 ratio of machine hours used to normal machine hours was 100.2 for broad looms as compared with 94.5 for 1928.

Intensive Farming . . .

REPORTED results of 5-acre cotton contest conducted by Kendall Mfg. Co. in three South Carolina counties indicate advantages of intelligent efforts in raising cotton. . . . . The 54 contestants averaged 507 lb. per acre at an average cost of $38.31, average return of $91.26 and average net profit of $52.95 per acre. . . . . South Carolina Cotton Manufacturers' Association announced they have appropriated $2,000 for prizes in 1930 cotton growing contest.

Cotton Spinning Activity . . .

COTTON spindles operated at 100.3% of single shift capacity during January, which is a considerable gain from the low of 88.2% in December and compares with 100.9% in November, according to Department of Commerce figures. . . . . During 1929 the average was 104.7% of single shift capacity, the same as 1927 and higher than at any time since the post-war slump. . . . . Figure for January a year ago was 111.6%.

Canadian Tariff . . .

OTHERS have their tariff troubles also. . . . . Wabasso Cotton Co., Ltd., Three Rivers, Quebec, presented brief to Tariff Inquiry Board at Ottawa requesting 10% duty on British cotton yarns finer than 40s. . . . . Bell Thread Co. and Canadian Spool Cotton Co. opposed application.

Knees . . .

IT SOUNDS awfully official anyway. Straw vote conducted by *The Pathfinder* gives total of 4,796 votes for skirts above knee, 22,533 for skirts at knee, and 39,138 for skirts below knee. . . . . Both men and women voted. . . . . In contrast with other groups nearly half of men over 50 voted for skirts above knee.

Guildmode . . .

THE first part of the consumer magazine advertising campaign of the Hosiery Guild, Inc., to promote fine gauge stockings without a seam, will start in April. . . . . Quality specifications

for 300, 320 and 340 needle hosiery were ratified, as previously drawn up, at recent meeting of executive committee. Mills are in production and accepting orders for March delivery. . . . . Likelihood that group of leading Canadian manufacturers of circular knit hosiery will join Guild loomed large this week. Hosiers, Ltd., of Woodstock, Ont., have already joined, and 6 others expressed interest at meeting Wednesday at Hamilton, Ont.

Differential Eliminated . . .

MEMBERS of New York Cotton Exchange changed by-laws to eliminate 35-point differential deducted when cotton was delivered elsewhere than New York on Exchange contracts. . . . . Change became effective Thursday. October will be first month traded on new contract with old contract expiring Jan. 31, 1931.

Tariff . . .

WOOL rates of the Senate Finance Committee were sustained by Senate action this week as textile schedules were reached in floor debate. New paragraph set up providing in substance that piece goods over 15% wool be dutiable as all wool. . . . . Cotton and rayon schedules held over. . . . . On silk wearing apparel and Jacquard woven fabrics rates reduced from 65% to 60%. Silk pile fabrics were lowered from 70% to 65% on wholly cut or uncut velvets and from 75% to 70% on partly cut. Schappe silk yarn or yarn of silk or rayon, if bleached or dyed, was reduced from Finance Committee 50% to existing 45%. . . . . Probable that they will all be fought over again before end of session. . . . . Senate to run nights.

Ask Me Another . . .

IN THE current "Analyses of Men's Wear Suiting Orders," issued by the Wool Institute, the usual figures are given covering percentages of patterns and colors in actual orders for the fall, 1929, and spring, 1930, fabrics. Under fall, 1930, however, there are blank spaces in which clothiers and millmen can insert their guesses on coming demand and check up later with the actual figures.

Wish It Were True . . .

ELSIE McCORMICK, columnist in the New York *World*, thus: "Whenever the silk trade or the cotton trade is in need of stimulation the surplus yardage is added to women's clothes." . . . . **And then a hint:** "Women are beginning to demand that the next time an industry is in distress, the extra goods be put into men's goods for a change. Ankle-length coats and bell-bottomed trousers of the sailor type would no doubt do wonders for the woolen trade."

King Cotton . . .

SENATE unanimously adopted Senator Heflin's resolution calling on Secretary of Agriculture to make recommendations relative to price of cotton even to the extent of temporarily closing the exchange. . . . . Senator Heflin believes that speculators have put the evil eye on cotton and wheat. . . . . Report of sub-committee which has been investigating cotton exchanges scheduled for Feb. 28.

Discuss Odd Lot Firm . . .

PLAN for special firm to handle sale of all seconds and remnants at end of season has been discussed in German clothing industry. . . . . Motive is preventing sale of job lots, bankruptcy lots, etc., at excessively low prices with consequent disruption of market prices, according to report received by Department of Commerce.

? ? ? ? . . .

A FEW of the questions asked our Editorial Department on one day picked at random this week were as follows: Machinery for making hooked rugs; use of proportion pump in textile industry; where to buy a certain type knitted fabric; possibility of quickly changing viscose rayon plant to produce acetate; six largest textile machinery builders; number of certain patent; average wool price, 1929; possible use of hard rubber in lining kiers. . . . . Not long ago we received one from Czecho-Slovakia asking the largest bicycle producer in U. S. . . . .P. S. They got the information.

Play Suits . . .

DESIGNS for children's play suits for winter, displayed in leaflet No. 54 of Department of Commerce, have aroused consumer interest. A stream of letters is reaching the Bureau of Home Economics, which published the bulletin, asking the names of manufacturers from whom the suits may be purchased. . . . . Soft, closely woven cloth, either of wool or cotton, is recommended in place of the leathery or knitted fabrics from which this type of clothing is often made.

Budgeted Inventory Control

Gives Practical Method of Balancing Production and Sales

By James A. Austin

Assistant Editor, TEXTILE WORLD

IN THE last two years Pacific Mills has decreased its inventory approximately $7,000,000 and, at the same time, net sales have increased $3,500,000. Delivery service is better than ever. The answer is an inventory control policy which discounts future probabilities and balances stocks with requirements. Controlled inventory, of necessity, insures a balance of production and sales. It is this latter feature which is of special importance, for the textile industry is beset with difficulties which have their origin in the failure of most companies properly to balance production with sales.

The method of so-called inventory control practiced by most concerns consists in forcing a sale when stocks rise too high. This policy, and the attendant lack of close production control, results in the following cycle: A spurt of buying, caused by any one of several factors, stimulates production. Through ignorance of true conditions and a desire to save in overhead by running full or overtime as long as possible, the mills continue on a high production schedule for some time after demand has slackened and stocks begin to pile up. Statistics come out and show that during the preceding month stocks have increased beyond a reasonable amount. The individual concern, already worried about its own stock situation, is further alarmed by conditions general in the industry. It is not long before someone becomes panicky and, in order to reduce inventory, sells beneath the market. Inevitably others follow suit and prices are demoralized.

It is at this point that an attempt is made to control production. Curtailment is urged and drastic cuts become general. Shortly afterward, shrewd purchasers may be attracted by the low level of prices and place large orders, thus starting the cycle again. It is significant that, where haphazard inventory control is practiced, production control takes place *after* the harm has been done instead of being used to *prevent* the accumulation of stocks. Byproducts of such a cycle are high costs caused by erratic operations, alternating from overtime to drastic curtailment, and discontented and inefficient labor. Where a balanced production and sales policy is in operation, mills won't and can't respond to a plea for curtailment—their operations are already based on required deliveries and they have no excess stock. There is nothing mysterious or complicated in correct inventory control and, as we shall see later, the actual operation does not require any super-this, that or the other.

Definite Economies

While the individual concern benefits in proportion to the number of concerns in the industry which balance production to sales, or more accurately, balance production to delivery requirements, there are also certain benefits which accrue to the individual from inventory control regardless of whether it is widely enough used to steady the market. Among these benefits are the following very definite economies:

1. Reduction of style risk in merchandise—considerably lessens the possibility of having a large stock of a waning style.

2. Reduction of market risk from fluctuating price level. The smaller the stock the less the loss if there is a drop. It may be argued that there is always the chance of cashing in on a rising market if there is a large inventory, but at least it is unnecessary gambling.

3. Reduction in capital required and interest charges.

4. Psychological effect of small inventory. Customers are aware that there are no excess stocks which may be sacrificed later. Within the organization the active movement and lack of stagnant goods have a beneficial effect—managers and salesmen are more apt to have the courage necessary to resist low price offers.

Most mills have long since realized the necessity of carefully studying any factor which will aid in economical production. It is a pity that the industry has not learned to give as much thought to its distribution problems. Many mills are now in the position of being perfect mechanical bodies, but there is no head on the body. It is not reasonable to suppose that any industry of the intelligence of the textile industry will long be content with a system of production control which consists, in the last analysis, of locking the stable door after the horse has gone. A different point of view is necessary, a point of view which recognizes that there is an important third function in addition to production and selling. That third function is merchandising. Merchandising gives proper weight to the divergent problems of selling and production and acts as a buffer coordinating productive capacities and market demands. After the point of view has been adopted it is still necessary to develop a method of procedure or technique to accomplish the

proper coordination. The method used by Pacific Mills is an illustration of the technique by which coordination has been accomplished and inventories decreased during a period when sales increased.

The Pacific Mills Plan

The first step in the Pacific Mills plan consists in establishing sales quotas and, what is more of an actual production guide, delivery budgets for each month, usually for a period of three months. The first impression is that it is almost hopeless to expect any reasonable accuracy in predicting sales and deliveries in advance for the various departments and lines. It is startling how well it can be done, however, once the heads of the various departments, merchandise managers, etc., get over their initial feeling of bewilderment and sit down to make an estimate. Statistics of past performances are studied and all factors which might make a variation in future performance are taken into consideration. It almost reduces down to a tabulation of the mass of information which every successful business man must have, but which, in most cases, he uses only unconsciously in making decisions.

The next step is the setting up of standard rates of turnover for all lines. Here again it is a matter of studying records and making a reasonable and intelligent prediction. Once the budgets and the rate of turnover for a line are established simple arithmetic gives the standard inventory which, if correctly manipulated, will be ample for the conduct of the business. Thus if the budget is estimated at 12,000,000 yd. for a year and the rate of turnover at 4 to 1, the standard inventory average would be 3,000,000 yd.

Obviously there are seasonal variations in individual lines and even in the total of the concern. If the inventory were kept at the average there would be times when delivery service would be inadequate unless provision were made for the seasonal ups and downs. Delivery budgets and inventory budgets are, therefore, varied on a monthly basis allowing for seasonal factors. It is on this phase that the responsibility of success largely rests.

System Must be Flexible

Nothing could be worse than setting up a schedule and then blindly working in accordance with that schedule. It is extremely important that the schedule be changed in accordance with changed conditions. Control of production of gray cloth within the organization or of outside purchases is, therefore, predicated upon performance. Each week actual deliveries are checked against budget deliveries, current sales against sales quotas, current stocks against inventory allowances and the general business situation surveyed. As soon as it is evident that the production or purchase schedules as estimated will, if continued, cause a rise or decrease in the inventory allowances, a change is made at once. By following up the stock to sales ratios, it can be discovered when any individual item has a tendency to become inactive and the remedy applied before the condition becomes serious.

Effect on Styling

One of the interesting side issues of the budgeted inventory is its effect on styling. There is always a tendency on the part of managers to have too many styles. The inventory would become unwieldy if all of the suggested styles were included. As a result the possibilities of any style are thoroughly examined in the light of volume and particularly from the view of turnover.

One or two items which dragged and required a large inventory in view of minimum economical production units would slow the turnover rate for the whole line. Therefore needless diversification is not allowed and only the necessary items are carried. Economies result from the concentration of the organization's efforts on fewer and livelier items.

There are many concerns in various industries where actual performance comes within 5-10% of budget estimates. Each year, as the organization becomes more familiar with the system, the accuracy increases. A concern adopting any such method of inventory control may find that during the first 6 months their estimates of deliveries and sales have not been very close, but at least they will have secured the benefits of a low average inventory, at least they will have definitely directed their thoughts to a solution of the difficult problems of merchandising, and at least they will have gone a long way toward the eradication of surplus stocks, a curse of the textile industry.

For Customer's Order or Stock?

Arbitration Progress Stressed

at Luncheon to A. D. Whiteside

A. D. Whiteside

THE formal acceptance of the principle of commercial arbitration by the wool goods industry, was recognized at a luncheon tendered by the American Arbitration Association to A. D. Whiteside, president of the Wool Institute. The luncheon was held at the Hotel Biltmore, New York City, Feb. 25 and was attended by men prominent in clothing, legal, and credit fields as well as members of the Institute and executives of the arbitration association. Beside Mr. Whiteside, the speakers included Lucius R. Eastman, president American Arbitration Association, presiding; George A. Sloan, president of The Cotton-Textile Institute; A. D. Walker, chairman of the arbitration committee of the Silk Association of America; Col. F. H. Johnson, president of the Botany Consolidated Mills; and I. Grossman, past president of the Industrial Council of the Cloak, Suit and Skirt Manufacturers.

Whiteside Analyzes Precedents

Facetiously referring to the fact that at present he was attempting to arbitrate the differences existing between the Wool Institute and the Department of Justice, Mr. Whiteside continued:

"The goverment of commerce and particularly commercial self government has not developed in keeping with the modern idea of expediting and eliminating every conceivable obstacle which may slow up the rapid growth required in industry today.

"Just now we are accepting, in one of the oldest industries in this country, the new idea of self regulation or self government for ourselves and with the markets of our products.

"While this move on our part may, in the minds of the majority here today, seem merely the acceptance by one more division of industry of the principle of arbitration, we are approaching the subject ourselves with the thought of using the decisions to be rendered on controversial subjects as the groundwork for building up the economic law and government of the woolen and worsted industry and its component parts.

"For the objective in our minds, based upon this tie-up with the American Arbitration Association, is to build, after a reasonable period has elapsed and after decisions are properly coded and referenced, the laws of government of this industry based upon the decisions rendered in the cases referred to this tribunal.

"For these decisions will first become our rulings, then precedents, and finally be recognized as the economic laws governing cases arising under similar conditions in the future.

"At the same time we recognize that no rulings on methods of procedure can be permanent or equitable unless they are in keeping in every respect with both the federal and the state laws.

"So these decisions will merely be the stepping stones to final decisions in pivotal cases which will be made by a Supreme Court or a Department of Justice or Commerce or some other functioning commercial court to be established in the future by the United States Government to act as a court of last resort in interpreting the economic law governing state, interstate and national transactions.

"For business today must have a voice, which can only be expressed in its own language, in the government of its affairs, and the federal and state governments must recognize this fact and view with a broader understanding the mechanism for the judicial solution of the problems of industry.

"When the industry has as its guide, in language of its own, decisions as to the procedure they may follow in the new problems which arise in our present day economic expansion, the uncertainty and many of the restraints which now exist may be eliminated or, at the worst, be avoided.

"In other words, the wool goods industry is viewing the step which is now being taken as its initial move toward the emancipation from external interferences with its normal progress or of the requirement to call in external agencies to enable it to take a proper and judicial course which will not be prejudicial to the interests or rights of any other economic element in developing its future.

"The progress of industry has in the past in many instances been prevented from attaining its fullest industrial development in the best interests of industry, the national government, the state and the people as a whole, solely because the laws enacted in the past have not been modified or repealed to interpret the new economic era now existing in this country."

Other speakers expressed the esteem in which they held Mr. Whiteside and their pleasure at the acceptance of arbitration by the wool goods industry.

Sloan Points Out Common Enemy

George A. Sloan, president of The Cotton-Textile Institute said,

"The Wool Institute and The Cotton-Textile Institute, are relatively young in the life of trade associations and trade institutes, but in the variety and intensity of experiences which have crowded the three years of our respective or-

ganizations, I am sure that Mr. Whiteside and I can attribute a certain amount of maturity—perhaps a little baldness and a few gray hairs—to similar problems.

"These are days when the word 'parity' is much heard and Mr. Whiteside will agree that this movement in international relations has a certain counterpart in the industrial field. For example, cotton and wool manufacturers are comparable on the basis of fundamental problems with which they are now concerned and to which they have been giving intensive consideration in recent years with the common hope of bettering conditions for those whose livelihood is dependent upon the successful conduct of these businesses. And while the formula and method of approach have not always been the same, I take it that we have faced a common—a very common—enemy in unsound merchandising.

"Within a very short time after the formation of the Wool Institute, Mr. Whiteside, with his keen analytical mind, put his finger on the fundamental difficulties of the wool industry and in so doing he brought to light a number of characteristics which may be observed in many other industries. His direct approach to problems has been characterized by plain speaking. Mr. Whiteside has been identified with the wool industry through an eventful and extremely difficult period, but by his ability for clear thinking, his patience and hard work, he has made a definite contribution to his industry and to industry in general.

"I have heard much of the effective work done by your association, Mr. Chairman, in the extension of commercial arbitration. Let me explain that The Cotton-Textile Institute has not included arbitration in its activities as it was thought advisable not to duplicate work which other associations in the industry were conducting. However, the officers of our Institute have enjoyed pleasant relations with Mr. Bernheimer, one of your honorary presidents, who has done so much in furthering the principle of arbitration during a long period of years.

"Our work in a sense is along similar lines as we are constantly endeavoring to smooth the difficulties and promote the welfare of our members. Therefore you will see that we have a very sympathetic interest in all well-directed efforts which help to bring about contentment and progress in industry."

"The Botany Worsted Mills have taken the line of least resistance," said Col. Johnson, "and avoided litigation. At present our sales contracts do not contain an arbitration clause, but I will recommend the inclusion of such a clause at the next meeting of the board of directors."

Grossman Praises Cooperation

I. Grossman urged that mills establish their own sponging and examining plants and deliver cloth ready for the cutting tables. Most of the friction between mills and garment makers arise in the contract sponger's work, he declared. Mr. Grossman said in part:

The real reason for the growing disinclination of my colleagues to rush into litigation is that a more amicable feeling has developed between our people and their sources of supply. I was a fairly large user of woolens for more than 30 years before I met a representative of the woolen industry in any but a selling capacity. I knew the salesman who called on me and, occasionally, I met a credit man. But there was no foregathering with the leaders of the fabric field; there were no conferences or meetings at which the common welfare was discussed.

"The Wool Institute, cannot be commended too highly for its part in promoting a better understanding between its trade and ours. A group of 20 leaders in the coat and suit field attended a general meeting called by the Wool Institute last May and I assure you that may of these producers met, for the first time, the heads of the mills with whom they had been doing business for decades."

◆

Champlain Acquire Corticelli Spun-Silk Mills

CHAMPLAIN SILK MILLS, one of the oldest and largest producing units in the spun-silk industry entered upon an expanded field of activity this week, when the company took over the business and plants of the spun-silk department of the Corticelli Silk Co. The acquisition gives Champlain the spun-silk mill operated by Corticelli at Leeds, Mass., the output of which will add more than 10,000 lbs. weekly to the producing capacity of Champlain, it is estimated. The Champlain company's own mills are at Whitehall, N. Y.

Both the Champlain company and the spun-silk division of Corticelli were pioneers in the silk-spinning industry in this country. Champlain Silk Mills were founded about 1885; the exact date of the start of the spun-silk division of Corticelli is not known, but it too is nearly half-a-century old.

The acquisition became effective Feb. 24. The expansion will enable Champlain to specialize in dyed and natural yarns for the woolen and worsted trade, and also to offer specially constructed yarns for the hosiery and underwear trade. Formerly, Champlain did not handle dyed yarn. The other activities of Champlain include: staple and novelty yarns for the silk trade; singles and ply yarns for pile fabrics; yarns for use in combination with cottons and synthetic yarns; machine twist for the glove and garment industry and special yarns for the production of fish lines.

Under the new arrangement, Frank W. Eaton, chairman of the board of the Corticelli Silk Co. becomes chairman of the board of Champlain Silk Mills, and J. P. T. Armstrong, president of the Corticelli Silk Co. becomes vice-president and a member of the board of Champlain company. The present officers of Champlain remain in their respective capacities. These officers are: Owen D. Frost, president; Theodore Belanger, vice-president; Charles D. Wolke, sales manager and Joseph Meierhans, technical director. A. Stewart Rogers, C. A. McKeegan and Thomas Prendergast, sales representatives of the spun-silk department of Corticelli will serve in the same capacity for Champlain in addition to Champlain's present sales force.

Discussing the anouncement, Mr. Frost, president of Champlain said:

"The significance of this step is that it will enable us to expand our lines and to offer a more complete service to the consuming industries. The addition of dyed yarns for the woolen and worsted trade is a particularly important point, and we will develop our activities in this direction."

The spun-silk department of Corticelli Silk Co. for the last three years had been in charge of W. Ernest Eaton, as manager. Under the new plan, Corticelli will have no spun-silk department, but will concentrate upon its broadgoods, thread, hosiery and other activities. Mr. Eaton has been appointed assistant treasurer of the Corticelli Co., and will devote himself to the aforesaid lines.

Union Attacks Industrial Democracy Plan at Danville

THE campaign now being conducted by the United Textile Workers of America, the purpose of which is to organize textile workers of the South, under the leadership of Thomas F. McMahon and Francis J. Gorman, president and vice-president of the union respectively, received more widespread attention this week as a result of an attack on the system of Industrial Democracy which has been in operation at the Riverside and Dan River Cotton Mills, Danville, Va., for several years.

The labor organizers at Danville are attempting to capitalize on the recent reduction in wages amounting to approximately 10 per cent which became effective at the Riverside and Dan River Cotton Mills Feb. 3, and which was passed on by representatives of the mill workers under the system of Industrial Democracy.

Statement by Mr. Fitzgerald

In a recent statement to the Riverside and Dan River people, H. R. Fitzgerald, president of the company, said:

"Our system of employe representation contains every element of collective bargaining that has any real merit. It is true that it does not give either employer or employe a club with which to intimidate or threaten anybody, but is based upon the principles of justice, cooperation, economy, energy and service. It has never failed to obtain for the employes the best possible rates of pay and the best working conditions. If anyone entertains any doubt as to the correctness of this statement, it can easily be verified with actual facts and authentic figures.

"For 11 years we have fought hard against the downward trend of post-war deflation, refusing to reduce wages when others were doing it, and persistently holding the living standards of our people as high as we could. We carried this burden without one whimper of complaint, trying to gradually increase the efficiency of the organization to meet the many changes in distributive demands, and to put out fabrics of superior merit that would win success both for the operatives and the company.

"The past two years have been extremely difficult, as evidenced by the fact that your company was compelled to curtail an average of more than 25% of its normal capacity. Furthermore, with a wage differential of more than 20% above the average of the entire South, it created an unsound economic condition which neither the company nor its operatives could afford. Not until we became firmly convinced that the situation was serious in that respect and that it would mean more money in your envelopes, instead of less, did we consent to the adjustment of wages and salary rates.

"Now that this has been done, we feel that your prospects have been decidedly improved, and while the goods markets are still very weak, with no real margin of profit for anyone, we are doing our level best to run the mills as near full capacity as we can. We cannot see very far ahead and can make no promise as to what the future may bring forth, but we confidently hope that you can soon be earning an economy dividend; more important, however, is the fact that with your economic condition improved, there will be less curtailment and in the long run more money in your envelopes than for the past two years.

"We have tried to encourage our people to think for themselves; not to be unduly influenced by superficial impressions, either inside the organization or outside of it, but to base their judgments upon what is right and fair.

"We regret the insidious temptation that is placed before you by these agitators, who appeal to your credulity with promises that neither they nor anyone else can make good. But we confidently expect that the vast majority of the members of our organization will continue to appreciate what they have accomplished by cooperation and that they will refuse in no uncertain terms to be deluded by these false promises."

Union Leaders Denounce Plan

At a meeting which was attended by nearly 2,000 employes of the Riverside and Dan River mills and members of their families, O. C. Woodbury, of Chicago, Ill., representative of the American Federation of Labor, and Francis J. Gorman, vice-president of the United Textile Workers of America, delivered scathing denunciations of the system of Industrial Democracy and sharply criticized the wage policies of the Danville textile mills. The so-called "stretch-out system" came in for unfavorable comment and Gorman went so far as to dispute the average wage of Riverside and Dan River employes as stated by officials of the company.

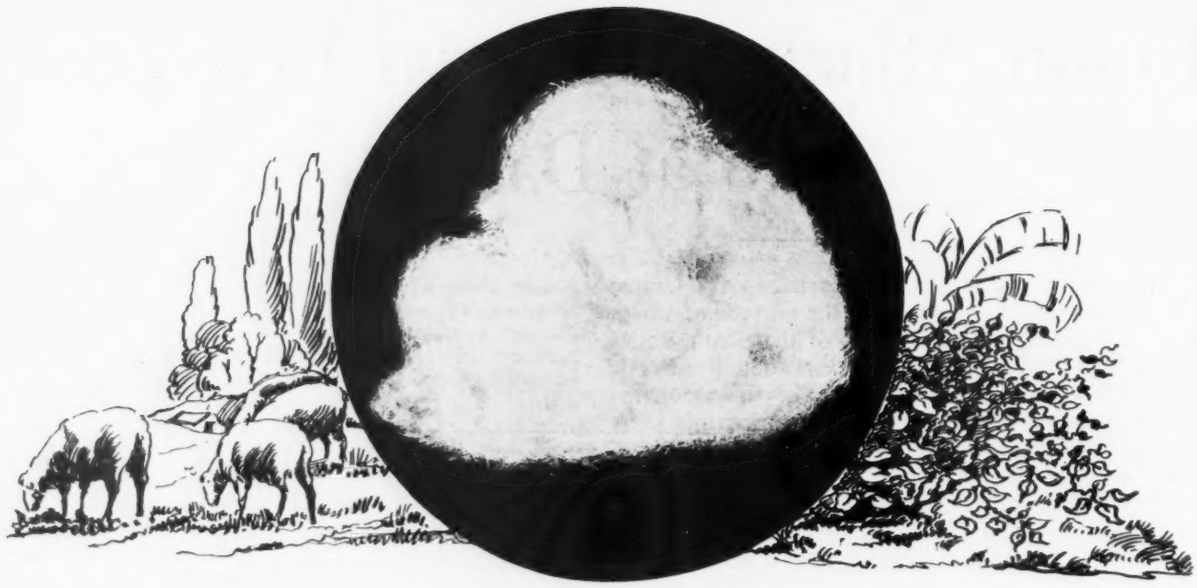
The union representatives read a letter, which was evidently written by them and addressed to Mr. Fitzgerald, one portion of which read as follows:

"You ask us to have confidence, and we ask in reply, how can we have confidence when our conditions are getting worse from day to day? Our wages taken away from us, our work increased beyond reason by the stretch-out system. We would ask you again if the workers have not cooperated with the company to the breaking point? If you desire to restore confidence why not restore our wages, meet us on a common ground and let us work out together a plan to reduce costs with fairness to the workers and to the company?

"Industrial democracy is a misleading term as used here. No benefits have resulted from it to the workers. First, it took away the paying of time and half for overtime. This was done to increase the economy dividend. The payment for stoppage for lack of material has been discontinued, presumably for the same reason. Many believed that stretching the people out would make the dividend grow and that the workers would share with the company on a 50-50 basis, as so often and persistently claimed, but on the contrary no economy dividend has been paid for the past two years, and on top of all this you reduce our wages 10% without the workers having anything to say about it.

"The workers in the mills want their own union and we ask why they should not have it. They also want an opportunity to demonstrate to the company that this union will be helpful and not harmful. We believe in collective bargaining and will continue along these lines, but we cannot subscribe to a policy of so-called Industrial Democracy which forces the workers downward."

Since the Riverside and Dan River Cotton Mills constitute the largest single cotton manufacturing organization in the South, there are several hundred workers in the mills of more unsettled disposition than the large majority who are year-in and year-out employes of the company. It is natural that the pleadings of the union representatives would influence this transient element first and it will be interesting to observe what effect the complaints of a "militant minority" will have on the steady workers who have formed the backbone of Industrial Democracy at Danville for many years.



Science Seeks
Wool From "Vegetable Sheep"

By William B. Dall
Associate Editor, TEXTILE WORLD

THE experimenter from his laboratory is constantly offering the textile industry old fibers in new guises. Within the last year or two a variety of treated vegetable fibers have been promoted as wool substitutes, and the backer of each has foreseen breadth of utility which so far has not materialized. For the most part the experimenters draw upon the large group of tropical fibers, now little used for clothing, and, by chemical and mechanical treatment, compel them to bear some resemblance to wool.

Low-priced, spinnable fibers are numerous, starting with the widely used jute, sisal and hemp, and running through the lesser exploited plants, such as ramie and pineapple fiber, to the fiber-bearing plants which grow over thousands of square miles in the tropics but which so far have found little or no commercial use. Most of the fibers named hold their place in commerce because workable into coarse, cheap materials.

High Rewards are Possible

The possibility of deriving a fiber from a cheap base, to compare with cotton, wool or silk holds all the lure that the transmutation of baser metals into gold held for the alchemist of the Middle Ages. Excepting only the man-made rayon, all the textile fibers now in use have virtually grown up with the human race. Scant hope exists that any material will be developed over night to displace a measureable quantity of any of them, but as an evolution through coming years anything is possible.

Fibers and materials made from them, of course, settle to their respective price levels governed by what the consumer will pay for the characteristics which they offer. Clearly, unless these new substitute fibers offer superior characteristics at a price commensurate with that of the established fiber, or unless they offer an attractive economy to compensate perhaps for their failure in certain qualities, they can have no broad market in the world's commerce. Because these conditions are not yet unqualifiedly met, the substitute vegetable fibers so far offered, find limited use and that principally in mixtures. Rugs, blankets, felts and suitings have been successfully made from 50% wool and fiber mixtures. Though often better than cotton mixtures, they rarely have the quality of all-wool.

Ramie and Jute are Bases

A rather general survey of a scattered field indicates that jute and ramie are the two principal sources from which the new vegetable wools are derived. These fibers are treated mechanically and chemically to degum them and they are then subjected to a sort of bleaching or mercerizing process to give satisfactory color and feel. From this process comes the desirable wool-like crinkle. Most experimenters have to trust to luck on spinning qualities, and the handling of the fibers easily by existing machinery is one of the problems which render general acceptance of the fibers difficult.

The method of promotion of these fibers in many cases takes them out of the field in which they might be able to stand upon their own merits and puts them into a field where they are in effect an adulterant and consequently not exploited to the consumer. If used at all in fabrics, it is usually without specific mention by the manufacturer.

Many of the ramie derivatives gain in strength when wet, and as a consequence offer a feature for use in cheap wool goods which many of the synthetic fiber wastes sometimes offered as "artificial wool" lack. Some of the ramie and the jute derivatives appear to have fair felting qualities and might serve well in carpets, felts or cheap woolen goods. The extremely diverse length of fiber in these substitute materials makes it difficult to handle them on the usual machinery. Since the fibers are originally fairly long, it would seem possible to cut them to any predetermined length. In processing, however, there is often considerable fiber breakage as brittleness is one of their weak points. They consequently appear to better advantage and handle better when mixed with wool, than when used alone.

Advantage of Mixtures

Mixtures of wool and vegetable fibers possess the advantage of permitting two-color effects through cross dyeing. Best results are said to be obtained by stock-dyeing the substitute fiber the darker of the two colors, leaving the wool fiber undyed and then wool-dyeing the piece. Advantages of quick delivery from stock of a wide range of mixtures are obtained through this method. The woven goods may be held undyed until orders are received. An accumulation of slow selling colors is thus avoided. This property is also to be found in mixtures of wool and rayon waste.

No less authority than L. H. Dewey of the Bureau of Plant Industry, U. S. Dept. of Agriculture, believes that an admixture of ramie should greatly improve woolen yarn because of its firming qualities. Judging from samples he has seen, he regards it as superior to jute for this purpose. His pamphlet on Ramie (Miscellaneous Circular No. 110), published last May by the Department of Agriculture, gives much information on the plant. The following facts are quoted from it:

Dried strips of ramie bark, hand cleaned but not degummed, are known as china grass. That name is incorrectly used to designate the plant. In 1918 the London market on this material ranged from £80 to £160, while in 1927 it ranged from £48 to £58. Exports from China to the United States touched 3,500,000 lb. in 1918 but were only 4,398 lb. in 1920. Ramie has excellent strength as compared with other fibers, but is rather poor in elasticity, and, as compared with silk and cotton, is poor in torsion, that is, it has slighter ability to resist strain when bent or sharply twisted.

It is characteristic of the vegetable group of wool substitutes that fancy names are applied to the finished fiber. Most makers are reticent in stating their actual raw material, and probably few of them have anything patentable in the form of a process.

Among the fibers which have been noteworthy in recent years a few are mentioned herewith though no claim is made for completeness of the list:

Solidonia, made by Deutsche Farberstoff-Gesellschaft, Fuerstenberg, Mechlenberg, Germany, before the war.

Stycos, advertised to the trade in 1914.

Blendya, a foreign-made fiber which has achieved considerable prominence abroad.

Nufi, made by Basch & Greenfield Co., Newark, N. J.

Fibruck, the product of a New York company.

Woolike, made by the Ross Products Co., New York.

Ramite, made by the American Mfg. Co., Brooklyn, N. Y.

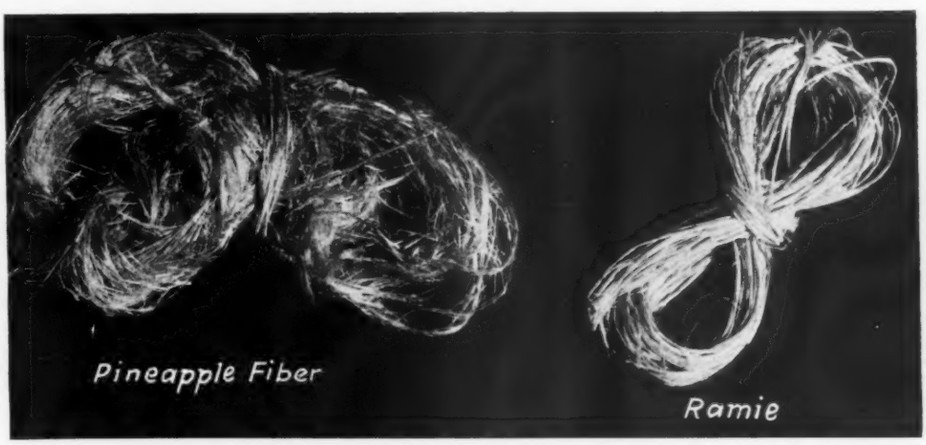
A fiber made by the Long Textile Fiber Corp. of Vinton, Va.

It is the opinion of impartial observers that the whole art of wool and vegetable blends will be more rapidly advanced when the various substitutes are offered quite plainly under their own names. The fabric manufacturer who uses them cannot call his product all-wool under any circumstances, and it is quite as likely that the public would grow to recognize virtue in a wool and ramie mixture as quickly as they would in a mixture of wool and some material that might as well be named after a Pullman car or a disease. Development of a generic name for all vegetable substitutes for wool might be helpful.

The Real Field for Substitutes

In an era when the labor cost going into a fabric is relatively high as compared with the cost of raw material, the incentive to save small amounts on the latter item is not so strong as it might have been 15 or 20 years ago. Cotton warp worsteds are now less common and cotton mixed woolens are found principally in blankets and underwear. Wool shoddies are available at low prices, and fabric makers using them may call their product all-wool, thus turning out an inexpensive fabric without losing caste. Clothiers too have high labor costs and fabrics must have certain minimum quality requirements to warrant making up in quantity.

In carpets and felts, however, some conditions which limit the clothing industry do not appear, and here is consequently offered a field where development work on vegetable substitutes may be undertaken with a probable minimum of resistance.



Two Types of Fiber as They Appear After Hand Stripping

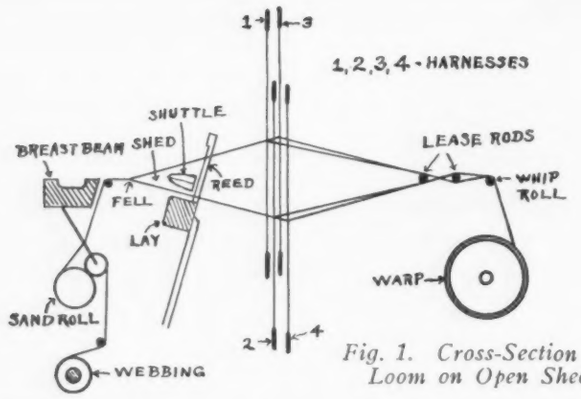


Fig. 1. Cross-Section of Loom on Open Shed

Foundation Design Paper for

By Edwin J. Gibl

FIG. 1 illustrates the open shed and the relative positions of the shuttle and other parts of the loom. Point paper is usually designated by the proportion of ends (or vertical rows of squares) to picks (or horizontal rows of squares). Common styles include 4 x 8, 6 x 16, 7 x 12, 7 x 24, 8 x 6, 8 x 7, 8 x 8, 8 x 10, 8 x 12, 8 x 16, 8 x 24, 9 x 24, 10 x 24, 11 x 24, 12 x 24, etc. The paper as printed makes no distinction as to which are the ends and which are the picks, and may be used in either direction to agree with the requirements of the work at hand. For harness work 8 x 8 or any other square paper may be used, but for jacquard work, where symmetry of design is essential, the style of paper must be selected with care.

It is evident that at the intersection of an end and a pick in any woven fabric, one of two things must take place: either the end must be raised, allowing the filling to pass underneath; or the end must be lowered, allowing the filling to pass over. Where the end is to be raised over the filling, the corresponding square on the design paper is filled in, or painted. This is known as a *raiser*. Where the end is to pass under the filling, the corresponding square on the design paper is left blank, or unpainted. This is known as a *sinker*. Several squares all painted or all unpainted occurring consecutively are termed a *float*. If a float occurs warp-wise, it is known as a warp float; if it occurs filling-wise, it is known as a filling float.

Paints Commonly Used

The paints commonly used in textile design are moist water-color paints and are put up in collapsible metal tubes, small glass pots, and two sizes of small porcelain dishes termed whole pans and half pans. The writer does not recommend the collapsible-tube form for textile-design work. The paint soon dries and hardens inside the tube, and it becomes necessary to break open the container to get at the contents.

In Fig. 2 are shown full-sized reproductions of an octagonal (glass) pot and a half pan containing moist water-color paints.

Paints in the powder form are a nuisance. They are usually mixed as they are used with some gelatinous substance such as glue or mucilage, in order to induce them to adhere to the design paper. Gum arabic dissolved in warm water mixes well with the powder, renders the paint easily applicable to the paper, and the mixture may be prepared in advance; but unless some preservative is added, the preparation soon becomes moldy. An infinitesimal quantity of dilute copper sulphate will act as a preservative.

Vermilion (red) is the color most commonly used. Other colors include ivory black, emerald green, lemon yellow, indian yellow, and new blue. Each of these colors is used for a particular purpose and has its own special significance.

The paints are applied with a round, camel's hair, fitch, or red sable brush. These brushes may be procured in various sizes, the most commonly used being the No. 3 or No. 4. Fig. 3 illustrates a No. 3 round, red sable brush.

Painting Procedure

The brush should be held lightly in the hand, first dipped in clear water and then worked lightly into the paint by twirling or rolling the handle between the thumb and forefinger. Each square should be painted in with but one stroke of the brush—not several little dabs; and, if the length of the float entails several squares, the entire float should be executed with but a single stroke. If the brush is too pointed to fill the squares adequately with one stroke, then it may be advisable to square off the extreme tip of the brush with a small pair of sharp scissors.

In starting a design, it is customary to begin at the lower left-hand corner of the space reserved for the design. If a square be inadvertently painted in, the paint may be removed by first applying a drop of clear

Fig. 2. Two Forms of Paint for Textile-Design Work

Fig. 3. Red-Sable Design Brush

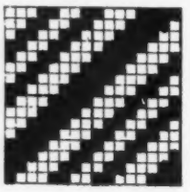


Fig. 13. Twill

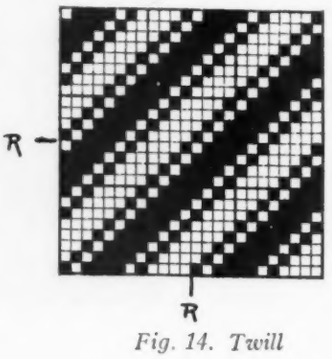


Fig. 14. Twill

Weaves and Narrow Fabrics

Gibbons

water with a clean brush, and after a few seconds soaking up the water with a piece of ordinary blotting paper.

Occasionally point paper will be found on which it is difficult to induce the paint to adhere. This condition is often due to dust or dirt (or, in paper that is being worked on, the natural oil that exudes from the pores of the hands or arms of the worker), but sometimes it seems to be due to the natural "bloom" or finish of the paper. A piece of art gum (gum-rubber eraser) brushed lightly over the paper will remedy the difficulty and permit speedy painting.

In the case of a design that has first been sketched in with lead pencil, and on which the use of an eraser would endanger the figure, the careful use of a mild soap (such as Ivory) is recommended as a remedy. The moist brush is worked lightly over the cake of soap and then in the paint, or vice versa. If much erasing is to follow the painting, it is advisable to use the soap sparingly, as an excessive amount of soap seems to render the paper impervious to the paint and, of course, allows the pigment to brush off easily.

A light coat of thin white shellac evenly applied over a design with a soft brush will preserve the paint in its original brilliancy for many years. This treatment will not discolor the design, and if the surface becomes soiled it may easily be cleaned with a soft cloth moistened in water.

The Foundation Weaves

There are three basic weaves from which all others are derived. These are known as the foundation weaves, and comprise:

1. The Plain Weave
2. The Twill Weaves
3. The Satin Weaves

The plain weave is the smallest possible weave by which a fabric may be constructed, and it is also the strongest and tightest weave. On account of its closeness, the plain weave does not permit of such high sley (number of ends per inch in a cloth or fabric) as do most of the other weaves.

In the cotton industry the plain weave is often called the "cotton weave," while in the silk industry it is called the taffeta weave. It is also called "tabby" weave, this term probably being a corruption of taffeta. Fig. 4 shows a cross-section of a fabric constructed of plain weave.

One repeat of any weave is the smallest number of ends and picks on which the complete order of interlacing is contained. All other repeats in a fabric or design are but repetitions of this first repeat.

The plain weave is written $\frac{1}{1}$, and when appearing

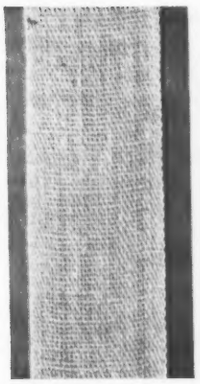


Fig. 5. An Electric Tape

Fig. 4. Cross-Section of Plain-Woven Fabric

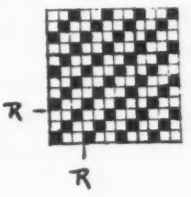


Fig. 6. Prunelle Twill, Filling Flush

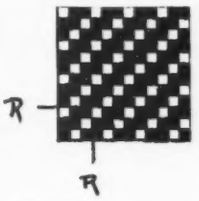


Fig. 7. Prunelle Twill, Warp Flush

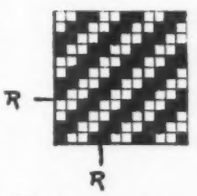


Fig. 8. Cassimere Twill

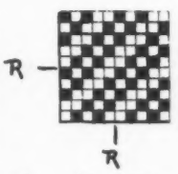


Fig. 10. Two Down, One Up, One Down, One Up

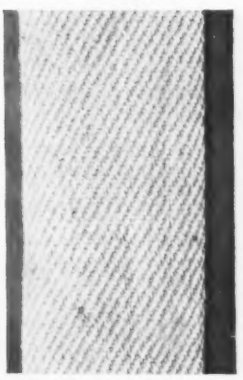


Fig. 9. Fabric Constructed of Two-Up-Two-Down Twill

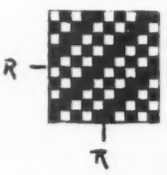


Fig. 11. Two Up, One Down, One Up, One Down

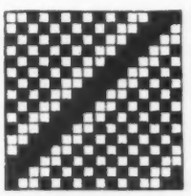


Fig. 12. Twill

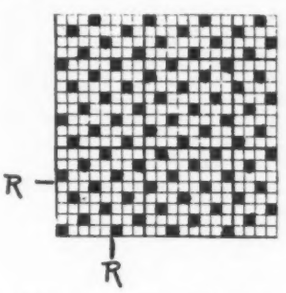


Fig. 15. Five-Harness Filling-Flush Satin

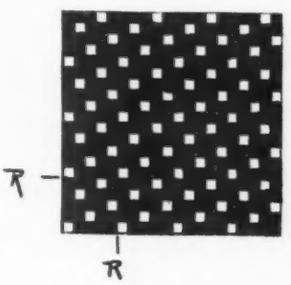


Fig. 16. Five-Harness Warp-Flush Satin

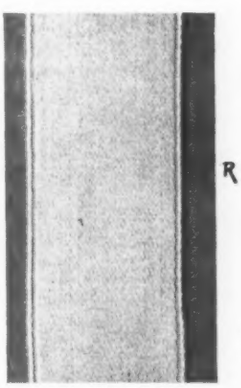


Fig. 17. Five-Harness Warp Flush Satin

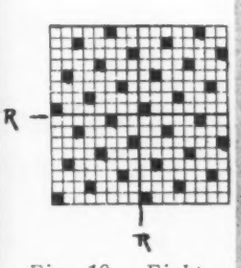


Fig. 19. Eight-Harness Filling-Flush Satin

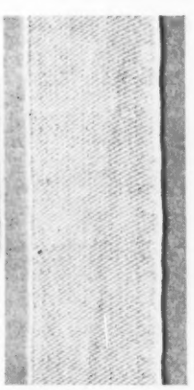


Fig. 18. Eight-Harness Filling-Flush Satin

so is properly read "one up, one down"; though it is often referred to as "one-and-one." It is employed in almost every class of narrow fabric, not only by itself, but in combination with every other weave. One of its greatest fields is electric tapes.

Fig. 5 illustrates an electric tape in which the interlacing is in plain-weave order. This is a ¾-in. fabric, has 62 ends of single 20s cotton in the warp, and 38 picks of single 30s cotton filling.

The Twill Weaves

On account of the lesser number of interlacings, twill weaves produce a much looser fabric than does the plain weave and, consequently, permit of a higher sley.

Twill weaves are designated by the order in which the first end interlaces as $\frac{3\ \ 1}{1\ \ 1}$. This is read "three up, one down, one up, one down." Note that the total of the raisers and sinkers in this twill is six. This is the *sum* of this twill, or the least number of ends and picks on which one complete repeat of the weave may be placed.

Any number of ends and picks may be used in one repeat of a twill weave, but the smallest number of harnesses on which a twill may be woven is three. This is known as the *prunelle* twill, and may be made filling flush, $\frac{1}{2}$, or warp flush, $\frac{2}{1}$.

Fig. 6 shows four repeats each way of the $\frac{1}{2}$ twill, and Fig. 7 shows four repeats each way of the $\frac{2}{1}$ twill.

The $\frac{2}{1}$, $\frac{1}{2}$, $\frac{3}{1}$, and any of the other extremely uneven-sided twills are seldom used by themselves in narrow fabrics (except in very light textures), as any weave that is preponderously uneven-sided is quite apt to cause the material to curl. However, all of these weaves are used extensively in the construction of narrow fabrics, but mostly in combination with other weaves.

Fig. 8 shows three repeats each way of the $\frac{2}{2}$ twill. This is known as the cassimere twill.

Fig. 9 shows a fabric constructed of the $\frac{2}{2}$ twill. The warp is 72 ends, 20/2 cotton; and the filling is 42 picks, 20/1 cotton.

Fig. 10 shows two repeats each way of the $\frac{1\ \ 1}{2\ \ 1}$ twill; and Fig. 11 shows the warp effect of the same twill, or the $\frac{2\ \ 1}{1\ \ 1}$ twill.

Fig. 12 shows one repeat of the $\frac{3\ 1\ 1\ 1\ 1\ 1}{2\ 1\ 1\ 1\ 1\ 2}$ twill. The sum of this twill is sixteen.

Fig. 13 illustrates one repeat of the $\frac{4\ 2\ 2}{3\ 2\ 3}$ twill.

Fig. 14 shows two repeats of the $\frac{1\ 1\ 4}{4\ 1\ 1}$ twill.

Angle of Twill

The degree of angle at which any twill will traverse a fabric may be determined as follows:

$$\frac{\text{Picks in one repeat of weave} \times \text{Ends per inch in fabric}}{\text{Ends in one repeat of weave} \times \text{Picks per inch in fabric}} = \text{Tangent}$$

and,

$$\frac{\text{Ends in one repeat of weave} \times \text{Picks per inch in fabric}}{\text{Picks in one repeat of weave} \times \text{Ends per inch in fabric}} = \text{Cotangent}$$

Then, by reference to any table of natural tangents and cotangents, the angle of the twill may be found.

Example: What will be the angle of the twill line in a 1½-in. fabric which has 180 ends, has 92 picks per inch, and interlaces according to the $\frac{3}{1}$ twill?

Solution: 180 ends for 1½ in. equals 120 ends per inch; and, as the $\frac{3}{1}$ twill repeats on 4 picks,

$$\frac{4 \times 120}{4 \times 92} = 1.3043 \text{ tangent;}$$

and

$$\frac{4 \times 92}{4 \times 120} = .7666 \text{ cotangent.}$$

These figures, 1.3043 and 0.7666 are the tangent and cotangent, respectively, of the angle 52° 30′, which will be the angle of the twill in the fabric.

Satin Weaves

By virtue of the peculiar manner in which satin weaves interlace, smooth, all-over effects are obtained. Most satin weaves are entirely free from directional lines, such as are the distinguishing feature of the twill weaves; and the interlacings are scattered as widely as possible, but yet remain in a definite relation to each other. The number of the satin denotes the least number of harnesses on which the weave will repeat.

The five-harness satin is the smallest satin that can be made, and is often spoken of as the five-leaf satin. The seven-harness satin is the next smallest, it being impossible to make a perfect satin with six harnesses. From seven upwards, any number of harnesses may be used.

In a regular satin every end interlaces with but one pick, and every pick interlaces with but one end in each repeat of the weave.

Satins are made warp flush or warp effect when the floats on the face are warpwise; and filling flush, or filling effect when the floats on the face are fillingwise.

To obtain the points of interlacing in any satin the number representing the satin is divided into two unequal parts which have not a common divisor, and neither of which is the unit one. Either of these numbers may be used as the *counter,* or rising number. Thus in a five-harness satin, two or three may be used as a counter; and in the eight-harness satin, three or five may be used as a counter.

Fig. 17 shows four repeats each way of the five-harness filling-flush satin in which three is used as the counter. One repeat is marked off at *R*. Note that the first raiser is placed at the intersection of the first end and pick. Then by moving to the right one end and—disregarding the square next to the raiser—counting upwards three squares, the position of the second raiser is located. Again moving one square to the right, and again disregarding the square to the right of the raiser, and once more counting upwards three squares, the location of the third raiser is found. This process is continued throughout the repeat until there is a raiser on each end.

Rule. To find the points of interlacing for any reg-

(*Continued on page 111*)

Fig. 1. Yarn in the Grease and Dyed Buff and Blue

The Microscope and Camera as Arbitrators

By Herbert C. Roberts

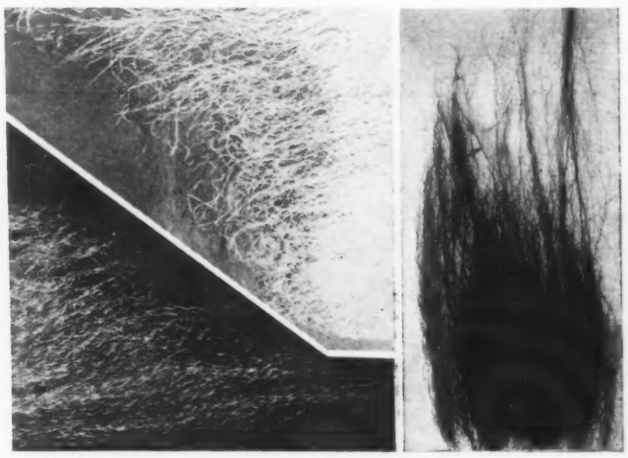


Fig. 2. (Upper Left) Photomicrograph of Fiber from Yarn in Grease. Fig. 3. (Lower Left) Photomicrograph of Fiber from Yarn Dyed Buff. Fig. 4. (Left) Photomicrograph of Fiber from Yarn Dyed Blue

DIFFERENCE in opinion as to the uniformity of two or more lots of yarns or fabrics is frequently a source of disagreement between the maker, dyer, and buyer. When this occurs, in order to come to a common understanding, it is first necessary to prove that there is an actual difference between the several lots of goods. If a dissimilarity is established, the next step is to prove where the variation is.

One of the best ways to come to a common understanding is the use of the microscope to visualize and the camera to record any differences. By the use of these instruments a permanent record of each lot of goods can be made, and the interested parties can see the same things under the same conditions. To illustrate the use of the camera and the microscope, we cite a specific case. A yarn manufacturer sold a large lot of yarn to a weaver. The yarn was sent by the spinner to the dyer, who in turn dyed the material and delivered it to the weaver. The yarn was to be furnished in several colors. The first shade to be delivered was a buff. The weaver was able to process this without noting any trouble. The next color shipped by the dyer was a dark blue. When this blue yarn was put on the looms, the weaver noted that there was more lint flying about the loom. A complaint was entered against the spinner. The spinner in turn complained to the dyer, expressing the thought that possibly the blue was over-dyed or injured in dyeing or drying, thus making the yarn brittle.

Each of the three parties examined the yarn in his own way, but could arrive at no conclusion agreeing with the others. The samples were submitted to a textile chemist, who made photomicrograph and photographs of the yarn in the grease, the buff, and the blue.

Fig. 1 shows a skein of each yarn in question. To the eye there is little to choose, but to the feel and handle there is a perceptible difference.

Twenty inches of each stock was taken as a representative sample. This was carefully dissected and the fibers sorted out according to the length of the staple. They were then photographed as shown in Figs. 2, 3, and 4. The following notes were made:

Fig. 2. Yarn in the grease. Maximum fiber length 9½ in. Twist in 3 ply, 3½ to 3¾ to the in. Twist in the single, 8 to the in.

Fig. 3. Buff. Maximum fiber length 10 in. Twist in 3 ply 4 to 4¼ to the in. Twist in the single, 9¼ to the in.

Fig. 4. Blue. Maximum fiber length 8½ in. Twist in 3 ply, 3½ to the in. Twist in single, 8½ to the in.

While there is more resemblance between the yarn in the grease and the buff than between the undyed and the blue, additional proof of the difference was obtained by making low-power photomicrographs of the fibers. These are recorded in Figs. 5, 6, and 7, taken from the centers of Figs. 2, 3, and 4 respectively.

There is a difference in the length of staple between the blue and the yarn in the grease. The waviness of the buff and the blue are different, while the buff and

(*Continued on page 111*)

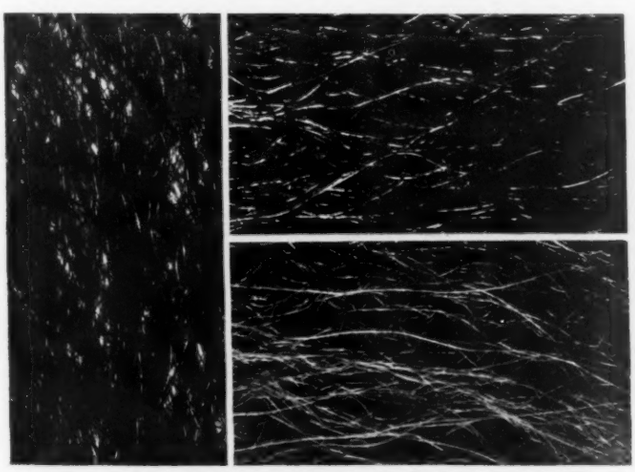


Fig. 5. (Lower Right) Fibers from Yarn in the Grease.
Fig. 6. (Upper Right) Fibers from Yarn Dyed Buff.
Fig. 7. (Left) Fibers from Yarn Dyed Blue.

British Rayon Trade Shows Rapid Growth and Keen Competition

By J. Guthrie Oliver

TAKING it all round, the last year has seen considerable progress in the development of rayon in Britain. The industry has certainly been highly competitive, but as the year draws to a close we find that production, thought slightly larger, has been much more in accordance with demand, and the amount added to stocks has been relatively small. To bring about this state of affairs it has been necessary to materially reduce prices, and, though several of the larger concerns were fairly well able to do this, some of the smaller companies are fighting for existence and their future is exceedingly doubtful.

Consumption of rayon has increased by about 3% when compared with 1928, despite a serious decline in exports of rayon and mixture fabrics to the eastern markets, where Japan has dominated the position and greatly reduced the sending of both Britain and Italy. Home trade, therefore, has shown a satisfactory expansion, which, as hinted above, has been made possible by reducing the prive levels. In what direction, then, has the increase mainly taken place? Demand for all types of rayon hosiery goods has gone steadily ahead. This has largely accounted for the excellent demand for viscose during 1929, the consumption of which has probably increased more rapidly than has been the case with the other two types of rayon. The home dress-goods trade has also provided a steady outlet, and it should be pointed out in connection with the above-mentioned exports of cotton and rayon mixture fabrics that the markets where goods of high rayon content are taken have expanded substantially. Further, in both home and Dominion markets interest has largely centered around the all-rayon fabrics, which have to some extent displaced mixture fabrics.

Competitive Market—The keener competition has had one main effect on the market which is the feature of interest. It has resulted in the demand for a cheap grade yarn in which price was the main consideration. Instead of firms bargaining to dispose of cheap grade yarns they have actually turned factories on to their sole production, and the very cheap yarns for weft and for knitting have to a considerable extent reduced or taken the place of ordinary grades. It should be noted, however, that this low priced yarn is of considerably better quality than the poorer yarns of previous years. Competition is naturally extremely keen in the low priced yarns which now sell at about 3/6d for 150 denier, and have to pay 1/— excise duty, so that, unless production is on a very large scale, it is difficult to imagine where there is any margin for profits. It is believed that some of the newer companies have been working at a loss.

As mentioned in the TEXTILE WORLD Rayon Number published in September last, negotiations have been proceeding towards the amalgamation of various of the smaller concerns to establish them on a sound footing and eliminate unnecessary competition. Since then it has transpired that the Branston Co. of Burton-on-Trent, has been negotiating with the American Chatillon Corp. for the formation of a British Chatillon Co., to work the "Ruth-Aldo" acetate patents in this country. The scheme includes the amalgamation of the Branston Co., Kirklees, Ltd., and the Rayon Manufacturing Co., and new capital is to be obtained from America and the Continent. The Apex Co., which has been closed down part of the year, has also been negotiating with another concern, and the Western Viscose Co., which went into liquidation at the beginning of the year, is contemplating the sale of its mills to another concern.

The future for these smaller units, if amalgamated with each other, may be less precarious than it is at present, but it is doubtful whether they will be able to carry on if the silk duties are removed next April. The statement made by Mr. Snowden just before Christmas has only made the trade more uncertain as to his intentions, and, while manufacturers and merchants may receive rebates on stocks, no help is likely to be forthcoming for yarn producers.

Acetate and Cuprammonium—Demand for acetate rayon during 1929 was at a fairly active level for the weaving trade, but there has been little or no expansion for this type of rayon for knitting. The price of acetate rayon is still considerably higher than viscose, and in knitted fabrics price is an important consideration in the bulk trade. Then for the more exclusive lines, such as full-fashioned hose, cuprammonium rayon is preferred, and silk and viscose folded yarns are also popular. Again there has been an increase in business in superfine filament viscose for this trade.

Owing to the fact that British production of cuprammonium is only small, and imported yarns have to pay the duty, the turnover has not expanded very materially in the last year or so. Competition from Continental made-up hose and fabrics is also an important factor in the cuprammonium trade. The new British Bemberg factory is, however, expected to start production during the current year, and there seems little doubt that there will be an extensive outlet for its products. In addition to the hosiery and underwear trade, there has grown up during the second half of 1929 a very substantial demand for cuprammonium crepe yarns for the manufacture of 100% rayon crepes, georgettes, and marocains.

Viscose Yarns—A new subsidiary of an important Continental group, the British Breda Co., is about to start construction of a large-scale viscose factory at Selby. The buildings to be used are those occupied by a former airship construction station, and the site is considered to be one of the best in the country. The company has a controlling interest in Breda-Visada, Ltd., which works the old British Visada factory at Littleborough. The most important foreign subsidiary in Britain is of course British Enka., and during the year this company, the second largest viscose producer in the country, has increased its production to over 40 tons of viscose rayon a week. Considerable attention is paid

to the fine-filament and special-quality rayons, and good progress has been made with these. The firm also produces cheap grade yarns on a large scale.

During the year Courtaulds, Ltd., have made further good progress with their fine filament yarns for both weaving and hosiery, and for the stocking trade their "Dulesco" yarn is undoubtedly used for the bulk trade more than any other type. Low luster yarns turned out by the newer concerns have not been wholly reliable in the way in which they retained their low luster, and this has made manufacturers in many cases sceptical about buying makes other than the original. We referred to the trend of demand towards cheap low grade yarns instead of the medium and standard qualities. Courtaulds led the trade in this respect by introducing a cheap grade yarn at a price at least 6d. per lb. lower than their previous lowest prices. It is fairly obvious that the firm is producing at lower cost than any other company, and there has been the usual talk of this being a direct attempt to smash the smaller companies. It is yet too early to say what the effect of the cheaper yarns will be on Lancashire's trade with the East, but at the present time Japanese quotations are very much lower than British, and the quality of their fabrics is exceedingly good. During the year Courtaulds have made arrangements for the establishment of a factory near to Preston in the center of the weaving industry, but it is not anticipated that any steps will be taken with this until something definite is known about the future of the duties.

Harbens, Ltd., the second oldest viscose producers in Britain, have extended their plant during the year and are now producing at the rate of 25 tons a week. The firm is in a sufficiently strong position not to have to cut their prices unduly to obtain business, and they are making good progress with fine and superfine filament yarns. They have introduced to the market a new viscose yarn which has 120 filaments in 150 denier, which presents interesting possibilities, as it is finer than anything produced in viscose except "Lilienfeld" yarn.

Courtaulds are not yet turning out "Durafil" yarns in very large quantity, and the yarn has not yet been graded. Strength and softness seem to be its chief characteristics. As far as the rayon sewing threads are concerned, it is believed that these have not been entirely successful, and while they have plenty of stretch, elasticity is lacking. The makers are, however, quite hopeful as to their future. The Nuera Co., which originally secured the "Lilienfeld" patents, has not so far succeeded in turning out this type of yarn commercially.

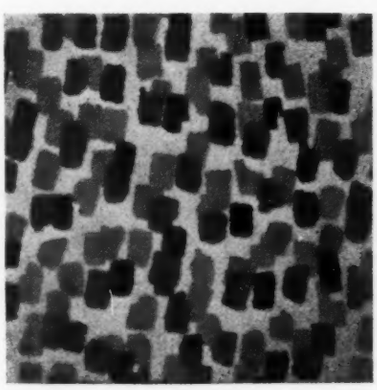
Prospects—The general prospects for 1930 are rather difficult to forecast and much will depend on whether or not the import duties are altered or removed. Under most circumstances the future of the weaving and knitting industries engaged on rayon is likely to be bright, though competition must inevitably be keen. For the smaller concerns there is sure to be a "weeding out process" with the survival of the fittest, and if the import duties are removed this process will be ruthless.

◆

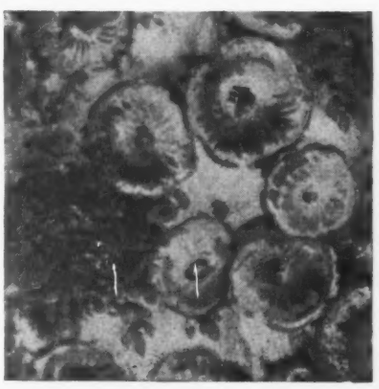
Cheney Offers Printed Novelties and "Watertints"

Above: Distinctive floral print chiffon delicately tinted in green and brown

Below: Original treatment of polka dot motif; green, gray and black dots on white ground



Below: Process print in bottle green against white ground with irregularly massed figures



Three of the new spring and summer fabrics in Cheney Brothers' showing of crepes and chiffons. Featured among the summer offerings of this house is a line of "watertint" chiffons which have excited keen buyer interest. The design in these fabrics is faint and subdued, giving the appearance of being seen through water; they are particularly suited to the new "long dress" vogue. The showing also stressed polka dot novelties.

Motor-Driven Centrifugal Pumps for Filtered Water

New Water Works

at Jones Division Plant of Arnold Print Works

By Howard E. Bailey

Assistant Engineer, Metcalf & Eddy, Boston, Mass.

CHANGES in the art of dyeing, printing, and bleaching cloth—as well as the production of better and more lustrous finishes—has created a demand for cleaner and softer water for process purposes. Most natural streams do not yield the same quality of water today as formerly, due to pollution by sewage or industrial wastes. The mill owner must therefore turn to artificial processes of water purification or treatment in order to maintain the quality of his product. In accordance with this policy a new filtration plant has recently been installed at the Jones Division Plant of the Arnold Print Works, North Adams, Mass.

The filtration plant as constructed consists of a sedimentation and storage pond of ten million gallons capacity, two rapid sand filter units having a rated capacity of one million gallons in ten hours, and a clear-water reservoir with a volume of 20,000 gallons. In addition a 125,000-gallon elevated tank and high lift pumps have been provided, as well as a complete system of distribution piping in the mill.

The Hoosic River, which flows by the site, is the principal source of process water. The town of Adams' supply is piped to the buildings, for use in the sprinkler systems. Certain processes are supplied from a system of shallow driven wells. Drinking water is obtained from other shallow wells.

Hoosic River water is diverted by a low rock-filled crib dam at Adams, Mass., about one mile above the mill, and flows through a channel excavated in natural earth to the mill-storage pond. The channel and pond formerly served as a head race for power wheels, before the introduction of electricity, but now furnish means for storing and settling process water before filtering.

The storage pond in the last 60 years had accumulated silt for a depth of about 10 ft., so that its average water depth was only 18 in. About 40,000 cubic yards of sand and silt have been removed, restoring the original depth and creating a sedimentation basin of about ten million gallons capacity. Plain sedimentation is all that is required prior to filtration at present. Provision has been made to allow chemical precipitation at a future date when necessary.

The old power-wheel headworks consisted of wooden trash racks, wire screens, and a wooden sluice gate. Only slight repairs were required to make an excellent filter intake, the old sluice gate being fastened shut and a new 24-in. sluice gate with ball-bearing geared stand installed in the side of the structure behind the screens. Raw water passes by gravity to the filter plant.

The ultimate capacity of the filter plant is two million gallons in ten hours. To provide this capacity four filter units will be required, of which two units are now installed in the southerly end of the storage building, with space and plugged-pipe connections provided for two

adjacent future units. Each unit has a capacity of 500,000 gallons in ten hours at a rate of filtration equivalent to 150 million gallons per day per acre.

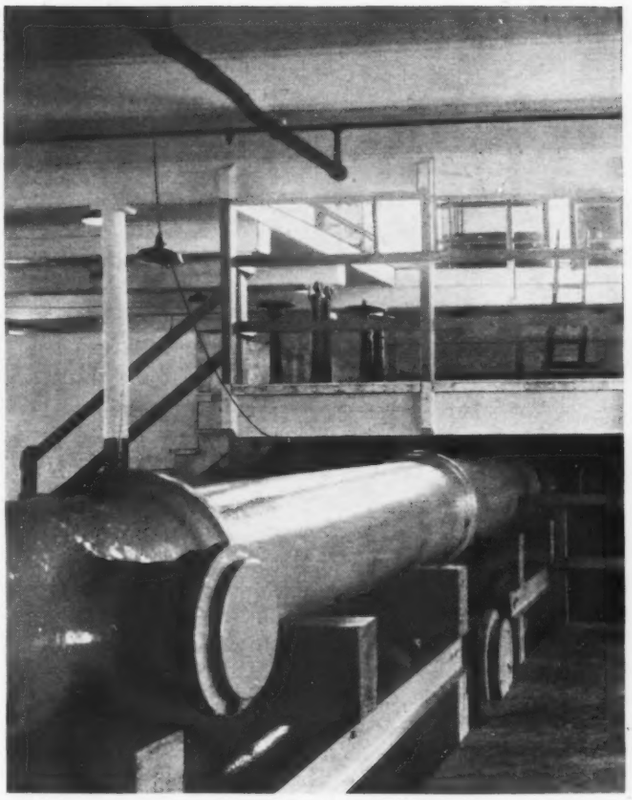
The filter boxes are of reinforced concrete 17 ft. 6 in. x 25 ft., inside dimensions, and 12 ft. from the floor to the top. The net filtering area of each filter is 17 ft. 6 in. x 21 ft. 4 in., or 373 sq.ft. The filter boxes have an over-all depth 2 ft. greater than is usually allowed in the design of such boxes. This additional depth permits drawing the storage pond down at times when road oil makes the Hoosic River water unsuited for mill use. Across one end of each filter box is a concrete baffle wall extending from the floor to within 4 ft. 6 in. of the top of the box. This wall forms an inlet chamber through which settled water is applied to the filter and from which wash water is discharged.

The filter medium consists of 33 in. of sand over 18 in. of graded gravel. The additional 3-in. depth of sand over the usual design is later to be removed after washings have segregated the finer materials on top of the filter. On account of the difficulty of obtaining filtering material meeting the usual specifications for sand, and because of experience which the engineers have had in utilizing a high-grade concrete sand for filter purposes, Plum Island sand was adopted for use with the intention of washing out and removing the fine particles after the sand is placed.

The underdrains consist of 3-in. cast-iron pipe lines 6 in. center to center over the filter floor. These pipes are provided with ¼-in. holes on the two lower quadrants, the holes being staggered on 6-in. centers. The underdrains of each filter connect through vertical tees to a central concrete conduit by which filtered water passes to a rate controller and thence to the clear-water basin.

Each filter unit contains three steel wash-water troughs 16 in. wide. The tops of the troughs are 2 ft. 6 in. above the surface of the sand. Wash water is provided from an elevated steel tank, and the flow to the filters is controlled by a wash-water rate controller. The normal vertical rise of wash water over the filters is 24 in. per minute.

The clear-water basin is a covered reinforced-concrete structure concealed under the mill floor, 15 x 20 ft., inside dimensions, with a maximum water depth of about



Filter Boxes and Operating Gallery at Jones Division Plant of Arnold Print Works

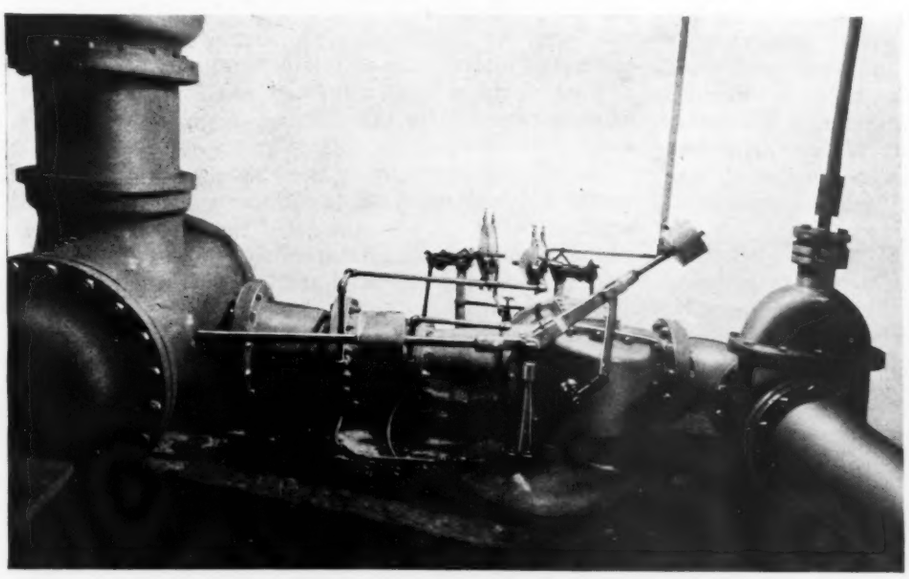
10 ft., equivalent to a capacity of 20,000 gal. The inlet pipe leading from the filters to the basin is equipped with special water seal. An overflow and vent are also provided. The high lift pumps draw their supply directly from the basin.

Owing to the fact that the filtration plant was fitted into an existing mill building, the pipe gallery is 20 x 13 ft. The principal pipes in the center of the gallery from top to bottom are influent, wash, effluent, and drain. Rate controllers are located in each of the effluent branches and in the wash-water line. To permit filtering to waste into the drain, 4-in. bypass pipes are provided.

All of the valves on the various branch lines are manually controlled, with the exception of the wash-water valve, which is hydraulically operated. Above the pipe gallery a wooden platform with connecting stairway forms the operating gallery of the filter plant on which are located the stands of the various valves together with 4-way valves for actuating the wash-water rate controller. Indicating loss-of-head and rate-of-flow meters for each filter unit are placed in the gallery.

In the same building with the filters and near the location of the future units are installed three 2,000-gal.-per-minute electrically driven centrifugal pumps. These

(*Continued on page 111*)



Rate Controller for Filter Effluent

Developments in Producing

Delustered and Low-Luster Rayons

By Arthur K. Johnson

IN THE progress of rayon development by the rayon makers and by the manufacturing consumers, along with improvements in other physical properties, came a desirable modification of luster. Just as the early, large field of rayon consumption was (and still is) in the knitting industry, so the general need for diminished luster in rayon soon became apparent in knitted goods. The need arose from the practical desire to get away from the vitreous luster of rayon, and so more closely to simulate real silk, as well as to attain greater variety in fabric decoration by contrasting lusters. Apparent need created demand, and commercial demand stimulated human ingenuity to satisfy the necessity.

PRODUCTION of subdued-luster rayon constitutes a notable advance in the manufacture of synthetic fibers. Arthur K. Johnson, Research Laboratory, Cheney Bros., outlines methods for production of delustered and low-luster rayons.

Efforts to satisfy the trade requirements were carried on at the same time by the fiber makers and by the manufacturing consumers. The successes of the latter were first in evidence, and were sufficiently great to assure the use of diminished-luster rayon. The methods employed to produce results by this group may be classed for the most part as makeshift. They represented an ingenious struggle to keep rayon in favor until more natural and more desirable products could be obtained from the fiber makers. These manufacturing consumers started with the usual trade product of lustrous rayon, and on it produced a condition of reduced luster. These modified rayons were, and are, the "delustered rayons."

Methods of Delustering

The general principles of the methods used to bring about delustering are few. They involve, fundamentally, interference with the uniform reflection of incident and "translucent" light from the surfaces of the yarn or filaments. The principles used may be grouped into general classes as follows:

1. Alteration in the rayon substance or distribution at the surfaces of the filaments, through use of (a) hot liquids and vapors, (b) hot alkaline (soaps) or acid solutions (strong acids or acid and alkaline salts as in tin weighting), or (c) swelling agents and solvents.
2. Deposition of foreign matter on the surfaces of the yarns or filaments, such as (a) sizing materials, waxes, fats, and soluble or insoluble soaps, (b) insoluble mineral particles or crystals like sulfur, barium, tin, or titanium salts; (c) organic pigment particles like insoluble dyestuffs.
3. Gentle physical abrasion of the filament surfaces by means of infusorial earths, clays, or precipitated chalk.
4. Alteration in filament position by varying the twist in the yarn; by allowing some shrinkage in finishing; or by use in conjunction with other types of fibers, as in plied or carded yarns or in fabric constructions.

These or similar processes for making delustered rayon were variously applied to yarns or fabrics in dyeing, printing, or finishing operations.

While there were some processes which secured commercial success, in general their limitations proved them unsatisfactory. This came about (1) through the undue influence of these processes upon other needed characteristics of yarn or fabric (feel, hand, pliability, strength, or working qualities); (2) because of difficulty of control and of accurate, uniform reproduction in routine processing; (3) because of interference with later processing; and (4) on account of the general temporary effect upon the luster, which returned later upon use or upon washing of the goods.

Delustering processes, while causing some inconveniences and sad experiences, demonstrated the need of subdued luster. They stimulated the demand and sustained it until rayon producers were able to furnish a more scientifically produced article which could be relied upon for uniformity and satisfaction. There are some delustering processes which may persist as special finishing operations on regenerated-cellulose rayons, but more especially upon acetate varieties where they are more easily applied. Many must, it would seem, go into discard.

Low-Luster Rayons

In contrast to "delustered" rayons, there are now available for the regenerated-cellulose rayons some types of products which have, as made, a dull or low luster. This low luster is an inherent part of their nature. In the

Process in Manufacture of Rayon

field of acetate rayons there apparently has been no market demand for a low-luster yarn.

The principles of the methods used by the rayon manufacturers to produce low-luster yarns include in part:

1. Reduced internal optical uniformity or homogeneity. This is accomplished by the inclusion of foreign matter in the filaments. These materials are mixed with the viscose solution used for spinning, and are, therefore, spun into the filaments. Such substances include materials like vaseline or hydrocarbon products, oils or soaps, organic nitrogenous and halide compounds, and inorganic particles like sulfur. Such inclusion may be permanent or wholly or partially temporary.
2. Modified filament structure. Such modifications include: (a) filament size; (b) shape (as modified by tension and coagulation); (c) surface condition (as by pitting in the partial removal of foreign matter); or (d) porosity (by inclusion and subsequent destruction of gas-forming materials).

Each manufacturer who makes both lustrous and low-luster rayon has a special trade name to denote the latter type. Thus, a few domestic brands of low-luster yarn are Bemberg, Chardonize, Dulenza, Dulesco, and Lolustra.

An interesting microscopical means for determining the method which has been used in making a low-luster, viscose rayon was described in *The Rayon Record*, under the title "Dull-Luster Viscose." The method involves the use of carefully selected mounting media, giving the same refraction as the fiber substance, along with the employment of dark-ground (very oblique) microscopical illumination. Longitudinal and cross-sectional views of the fibers are studied.

The consumer of low-luster rayons is always interested to know how a new product compares in properties with the ones he has been used to handling. Table I gives some pertinent data which compare the physical properties of low-luster and lustrous rayons of all regenerated types.

From the point of view of consumption it is believed that the knitting trade is thus far the chief user of low-luster rayon. Some types, however, are used to a considerable extent as effect threads in cotton piece goods and in the more filmy silk fabrics. The manufacturing companies are planning intensive advertising campaigns to popularize the use of low-luster rayon. The development of these new rayons marks a notable advance in the manufacture of synthetic yarns, and as the desirable qualities of low-luster rayons become better known a greatly increased consumption of these products is expected.

The issue of *The Rayon Record*, referred to above is for May 31, 1929. A list of English patents for viscose rayons for 1926-1928 is included. Other references are *Silk Journal*, 1927, IV, No. 37, p. 60; *Black and White*, Vol. 2 and 4.

Table I—Comparative Physical Properties of Low-Luster and Regular Regenerated Rayons.

Type	Size Conditioned	Filaments	Twist	Tenacity (gms-denier) Air Dried	Tenacity (gms-denier) Wet	Per Cent Elongation Air Dried	Per Cent Elongation Wet
A. Viscose							
1. Dull	155.4	24	3.04	1.46	0.68	18.8	21.4
2. Lustrous	151.3	24	2.67	1.89	0.88	27.0	36.6
3. Dull	155.8	36	3.64	1.19	0.44	21.2	30.2
4. Lustrous	153.1	24	2.95	1.66	0.74	28.5	38.6
5. Dull	150.5	60	3.86	1.36	0.52	16.8	18.8
6. Lustrous	151.4	60	7.03	2.02	0.89	18.8	26.0
B. Nitro							
1. Dull	146.4	30	4.04	1.56	0.53	17.8	15.4
2. Lustrous	148.8	30	4.00	1.42	0.62	19.0	17.4
C. Cuprammonium							
1. Dull	154.7	110	3.55	1.90	1.06	12.4	30.0
D. Acetate							
1. Lustrous	153.2	40	2.50	1.34	0.63	25.4	37.6

Note: The viscose samples are paired in order by their manufacturer.

Review of
Electrical Developments
in Textile Industry During 1929

By H. W. Reding
Textile Engineer, Westinghouse Electric & Mfg. Co.

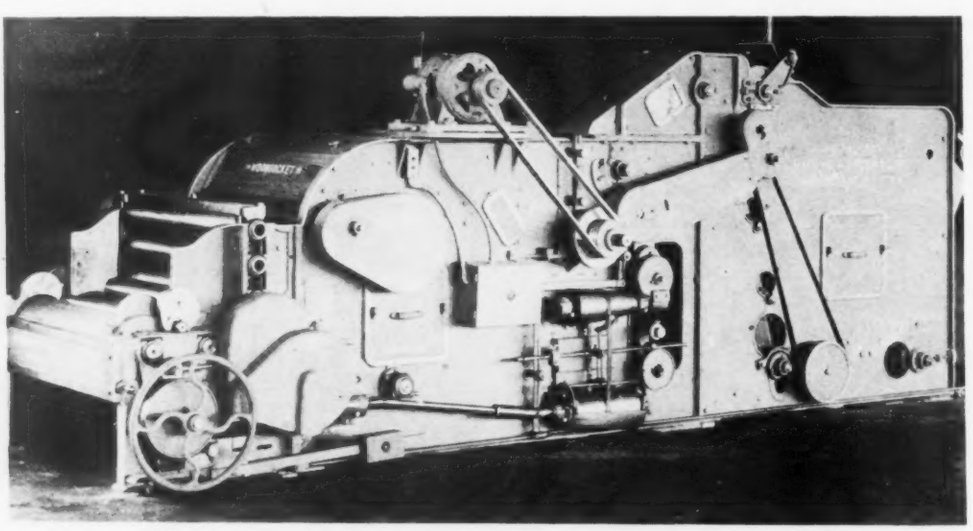
THE year 1929 has seen the introduction of at least two interesting new trends in the application of electrical equipment to textile machinery. The first of these is the tendency toward simplification of equipment without sacrificing any of the desirable features which have been added from time to time. The other trend is even more interesting but less apparent. It is the use of motors, control devices, and other electrical equipment as integral parts of the productive machinery, rather than as attachments added to complete machines.

In certain parts of the country there has been an increasing demand for a time-delay, low-voltage protective device. Most control equipment for motors is designed to open the circuit at once if the power source fails or is materially reduced in voltage. It is then necessary to start the motor again after re-establishment of service without resulting loss of production. There are many times when lightning or some brief disturbance makes the voltage dip for a very short time. The device mentioned above is designed to prevent the tripping out of the motor-control equipment if voltage comes back within about two seconds. In this short time the motors will continue to rotate due to inertia, and when voltage comes back they come at once to full speed. Many shutdowns are thereby avoided. Careful tests have been made on heavy twisters to determine the effect of brief interruptions. It has been found that an interruption of four seconds has no detrimental effect on product, machine, or motor.

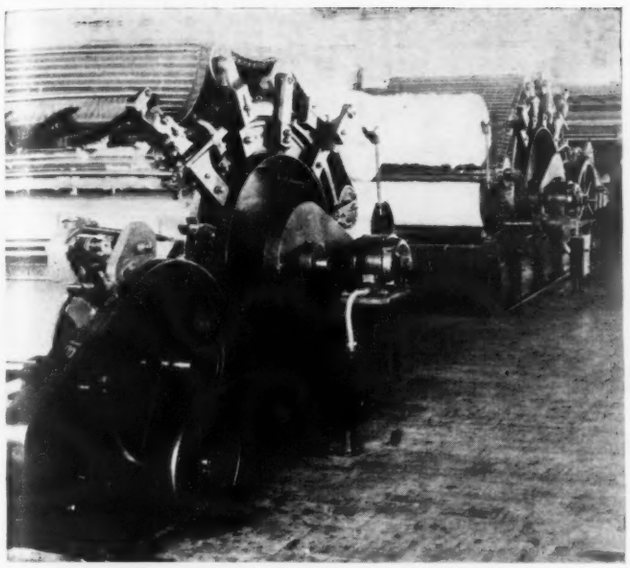
Experience with these devices has shown a marked decrease in the number of shutdowns during the lightning season. Each shutdown means a direct loss of production and a disturbance of the organization. Decrease in the number of shutdowns will very quickly offset the moderate first cost of the protection.

High Speed in Spinning Rayon

In the rayon industry there has been a decided trend toward use of higher speeds on bucket spinning motors. In the past, 6,000 r.p.m. has been accepted as standard but there is now a demand for equipment which will operate up to 10,000 r.p.m. As a result the motor has been redesigned for this speed, and the Micarta spinning bucket has been brought out. A spinning bucket 6 to 8 inches in diameter, revolving at 10,000 r.p.m., must be strong and safe and the materials commonly used for the low-speed buckets are not suitable. The Micarta bucket must have strength, it must successfully resist the acid to which it is exposed, and it must be finely balanced. The accomplishment of this development removes the



Application of Motor and Cog-Belt Drive to Modern Picker Equipment



Modern Card Drive

bucket as a limiting feature in the progress to higher speed.

Equipment is therefore available for bucket speeds up to 10,000 r.p.m. The adoption of high speed requires a readjustment of the entire spinning process, and methods are being worked out to take full advantage of the apparatus which is available.

Increased Use of Cog-Belt Drives

This year has seen a much wider use of cog-belt or multiple V-belt drives. Experience has shown that these belts will maintain a fixed drive ratio and, this being the case, the simplicity of installation and low cost of maintenance recommend them. There is no need of extremely accurate and rigid alignment, consequently installation is simplified and reduced in cost. No oiling or routine adjustment is needed and all possibility of harsh starting jerks is removed. This is a trend which is certain to continue.

A great deal of work has been done in the development of variable-speed spinning, and equipment in several forms is available which will bring about increased production. To permit this system of drive to be operated more economically, effort is being directed toward reducing cost and complication.

Individual Motor Drives

As an illustration of the trend toward simplification which was mentioned above, we might consider the customary application of an individual motor drive to a spinning frame. There is the motor with mounting, base, and drive; there is a linestarter to control the motor; a disconnecting switch ahead of the linestarter; and a master switch operated by the shipper rod—four pieces of electrical equipment. The development of a combined linestarter and disconnecting switch reduces the number of parts by one, decreases the space required, and reduces the cost of mounting and wiring

The improvements in existing applications are important and will be continued, but there must be development which will give the textile industry more complete benefit of the advantages which electricity has to offer. Most present applications are in the nature of attachments added to machinery. The growth in this way has been entirely logical and economic, but it is now time to see if more fundamental changes can be made which will reduce the cost of manufacture.

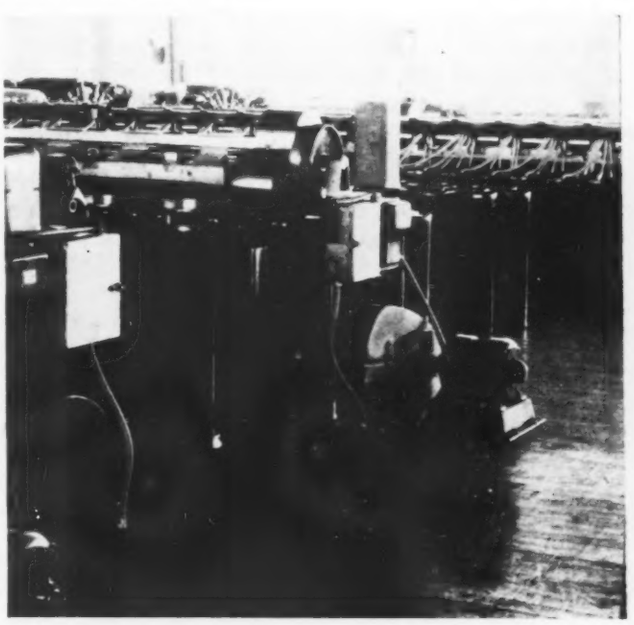
The effort in all lines of industry is to provide machinery which will make more productive use of the men who operate it, thereby decreasing labor cost. Electrical devices properly combined with machinery provide the means for this extension of human effort.

Some modern machine tools make good illustrations of this point. There may be several motors applied to one machine, each selected to have characteristics most suitable for the particular job to be done. These motors are then interlocked by suitable control devices so that the entire control of the machine can be brought to one point convenient to the operator. Where power is required, there is a motor of proper size and speed; where a brake is needed, there is an automatic electric brake; where variable speed is required, the motor automatically runs at the correct speed. All is designed to give maximum production and safety with a minimum of attendance.

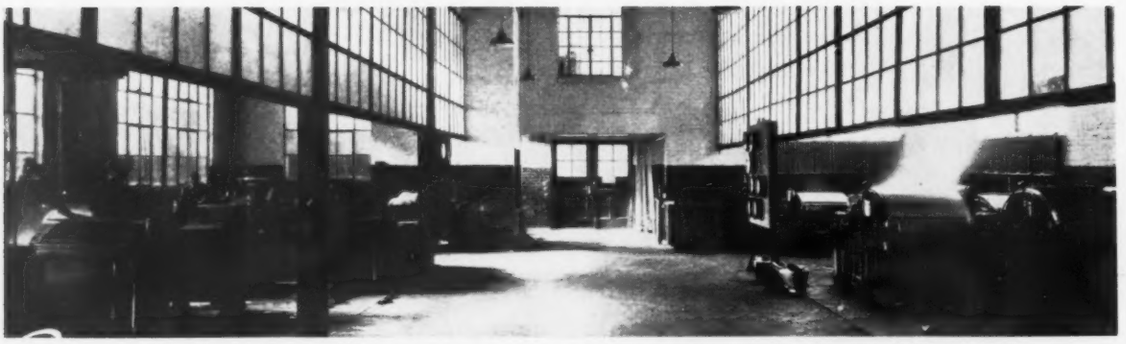
Knitting-Machine Drives

This conception of the possibilities of electric power has not received the attention to which it is entitled by the textile industry generally, but the idea is growing. Each year sees new developments which make fuller use of electrical flexibility. It has not been long since full-fashioned-hosiery knitting machinery was driven by a constant-speed source of power. Modern machinery can give much greater production if the speed may be varied to suit the operation. Some parts of the work require low speed for the best quality and other parts may safely be done at high speed, thus speeding production. The power equipment now provides for several speeds with automatic control for changing from one to another at exactly the right time. After a predetermined length has been knit the machine automatically stops.

This development is one which provides the highest safe speed for each operation, therefore insuring high output and first quality. The operator is relieved of routine operation, allowing him to concentrate on the more important parts of the work. Routine operation can always be performed better by machinery than by human attendants.



Motor Application to Drawing Frames



View in Dyehouse of Wayne Knitting Mills, Fort Wayne, Ind.

Wayne Knitting Mills Completes New Dyehouse

THE new dye plant of Wayne Knitting Mills, at Fort Wayne, Ind., built in 1929, is designed to meet the exacting requirements of the full-fashioned silk-hosiery trade. A fire-proof building recently erected for other purposes, somewhat irregular in shape, and approximately 50x160 ft., was completely reconstructed and enlarged, and formed into quite a model dyehouse.

The original building was such that the new dyehouse necessarily was formed of two large dye rooms, connected end-to-end by a smaller central portion. This central portion was made the control point: the desk space for the head floor man of the dyehouse staff; the receiving station for degummed hosiery ready for dyeing; the delivery point to the boarding room for dyed and extracted hosiery; the point of delivery to the respective dyers of the dye solutions from the drug room; the station for instantaneous pneumatic-tube transmission of hosiery dyeing samples to the color-sample room, and for receiving the color-formula cards from the color-sample room.

The office of the head dyer is in the color-sample room, occupying a second-floor wing projecting from the far end of the rear dye room. A large casement window into the dye room gives the head dyer a clear view throughout the entire length of the dyehouse. This color-sample room is flooded with north light through a large angular-plate-glass window similar to a photographer's window.

Dyeing Equipment

Aside from skein-dyeing machines for ingrain hosiery, and a few paddle-wheel machines for special purposes, the dye rooms are fitted with 16 Smith Drum and Klauder Weldon monel-metal, enclosed, rotary dyeing machines for color work, ranging in size from 25 to 200 lb. capacity, and one 500 lb. machine for black dyeing.

There are four other enclosed rotary machines of from 75 to 500 lb. capacity for bleaching and for degumming. These are located in an independent room for the purpose adjacent to the grey stock room and ramp to the dyehouse.

There are three large motor-driven extractors for dyed hosiery and, in addition, one in the degumming and bleach room, one in the laboratory, and one small sample extractor. All rotary dyeing machines are located along the sides of the dye rooms, back-to-back, facing cross aisles, opening off from the central trucking aisles. The central truck aisle floors are of concrete construction with mastic tops. The floors around the dyeing machines are of treated plank, laid with open joints. Service pipes, electrical conductors, and sewer drains for the various machines are carried in basements underneath the two large dye rooms. The basement floors are well pitched to drains and there is sufficient headroom so that all piping and equipment in basements is very accessible.

Elimination of Fog

One excellent feature of this dyehouse is that it is practically free from condensation or fog at all times. Even in extreme weather the air in the dye rooms is clear and comfortable. The roof construction is pre-cast concrete slab covered with two inches of cork and then with roofing. Plenum chambers cover the entire dye-room areas forming heated air spaces directly under the roof slabs. The under sides of the plenum chambers are of corrugated transite. Fresh tempered air is supplied to the plenum chambers by two York units and one Bayley unit. From the plenum chambers the tempered air enters the dye rooms through openings in the ceiling over the central trucking aisles. The tempered air sweeps down under glass deflecting metal sash, hung from the ceiling along the sides of the trucking aisle, and thence over the dye machines and up to the ceiling along the sides where it is exhausted, through exhaust fan systems, to the atmosphere. Automatic temperature control is provided.

The drug room is provided with metal closed containers for all dyes, a monel-metal sink equipped with a number of hot and cold water and swivel steam connections, and a supply of half-closed monel-metal dye pails. No dye stuffs are handed out in the dry state, but only in liquid form, substantially at a boiling temperature, in

(Continued on page 111)

Questions *and* Answers

THOUSANDS of inquiries are handled annually by the Technical Editors. In order that as many readers as possible may benefit from this service, we select problems of general interest for publication each week.

Eveners on Cotton Pickers at Fault

Technical Editor:

I have had considerable difficulty in obtaining good laps from my pickers, and have come to the conclusion that my eveners are at fault. Will you please advise me just what results may reasonably be expected from these devices and how I may determine whether or not they are working satisfactorily? (7095)

The first requisite in an evener is maximum sensitiveness to any change in the weight passing through. This sensitiveness can only be maintained by keeping the various parts working in proper unison with one another. Another important requisite is steadiness in action. This means that the cone belt must take its new position quickly and not travel up and down the cones. This traveling is referred to by some carders as "hunting." There must not be any noticeable amount of lost motion between the evener plates and the cone belt or any obstruction in the travel of the belt-shipper rod. If the evener meets these requirements and yet does not make satisfactory work, it is evident that the leverage is not adjusted properly.

One method of testing an evener is to make a lap from three laps on the apron, from four laps, and from five laps. If the leverage is right, the laps will all weigh practically the same. If they do not weigh the same, it is necessary to shorten or lengthen the leverage until the desired results are obtained. Although it is not expected that five laps will be running on the apron at any one time, if the evener can be made to take care of a condition of this kind and also make a good lap with three laps on the apron, it is certain that it will operate as it should when the usual four laps are being fed.

◆

Bleaching Surgical Gauze

Technical Editor:

We are making surgical gauze, using a 40s warp and 40s filling, 22x12x36 in. In our finishing process we use the peroxide of hydrogen bleach. This is giving excellent results as far as bleaching goes, as our fabric will not discolor in sterilization, but we find we have no absorbent quality in this gauze. We would like your suggestions as to method of treating the gauze after bleaching to give it the required absorbent quality. (7071)

While the peroxide bleach gives an excellent permanent white, it does not remove the fats and waxes from cotton as thoroughly as does the kier boil and the chemic method., We doubt whether there is any penetrating agent that you could add to your bleached gauze which would render it sufficiently absorbent. The simplest solution to your problem would probably be to scour the fabric well with soap and soda ash, or boil it with a 3% caustic soda solution before bleaching with peroxide. This preliminary treatment will tend to remove the fats and waxes, and give an absorbent fabric.

◆

Wrinkles in Blankets

Technical Editor:

Can you please send us some information as to the prevention of wrinkles in blankets, particularly near the selvages. We do not refer to crocking but to wrinkles which come in finishing. They seem to get their beginning in fulling and washing and are difficult to eradicate. (7062)

This trouble can be overcome by several methods. First, should the stock be of a low nature and susceptible to breaking, it requires some form of softening, although we must bear in mind that the character of weave is very often at some fault. Scouring before fulling is often a positive cure, although the added expense of doing so prohibits this general practice. Another cure is to soap the cloth thoroughly in the washer before fulling for about twenty minutes, take out in the soap, extract, and proceed to mill as usual. It would be well to mention here that frequent changing of the position of the cloth while fulling will prevent this annoying trouble. Change the cloth say every half hour, running it end for end in the opposite direction at every change. Turning or changing the position of the fabric will produce a decided turn for the better.

Keep in mind that the soap must be the proper weight and consistency to be of value; and that, as a wrinkle preventer, the heavy body forms a cushion for the goods while in the act of fulling or scouring. Thin, watery soaps or solutions are the main cause of all this trouble; for, before their work has been accomplished, the solution is thoroughly spent. If the emulsion holds in suspension the proper degree of saponification during the fulling process, wrinkles will be absent, providing the cloth gets the proper care in the machine.

It is not common practice on this class of work to tack

the selvages together; although it this can be done and pieces sewn into a complete bag, much trouble may be eliminated by the ballooning of the goods in fulling.

◆

Bleaching Card Waste

Technical Editor:

We are encountering some difficulty in bleaching oily card waste. Card waste is practically raw cotton fiber which, in the process of being carded, has become oil stained, thus containing mineral oil as well as vegetable oil. We have been able to separate the oil from the fiber. When trying to wash the oil away, it settled right back onto the cotton in big spots and streaks. I will outline the process we use in bleaching.

About 1,500 lb. of cotton is packed into a kier or vat, boiled six hours in 3% solution of caustic (that is, 3% of caustic on the weight of cotton, or 45 lb. caustic in the kier). The cotton is then washed off with water, a solution of 2° Tw. chloride of lime is run on and circulated for three hours. The chloride of lime is then pumped off. The cotton, in bleaching, has absorbed practically all of the solution. The material is then washed again and two quarts of sulfuric acid is gradually run in with the rinse water to sour or kill the lime. The cotton is then run through a washing machine and blued to preserve the whiteness. It is then run through squeeze rolls and into a dryer. We also used a solvent oil on the cotton to emulsify the mineral oil, but this spread the stain out more evenly, instead of in streaks. We know that this oil can be removed by the dry-cleaning process, but this method is too expensive. (7056)

The oil which is present in card wastes is mostly mineral oil caused by lubricating oils, although there are some vegetable oils and waxes present. The problem is, therefore, one of emulsifying this mineral oil and holding it in a state of suspension in the liquor of the kier so that it can be rinsed free from the goods. The use of caustic soda in this process is effective in removing the pectins, animal and vegetable fats, and waxes; but caustic soda is not the most effective agent for removing the mineral oil, as its emulsifying properties are relatively poor. The caustic soda must, therefore, be augmented with some agent which has good emulsifying properties toward mineral oil. In this respect, soaps, soluble oils, and sulfonated oils are more effective and efficient. Additions of solvents to these products greatly increase their efficiency.

A product has been developed which is being used very successfully in combination with caustic soda for such purposes as are outlined in the inquiry. This product is a combination of sulfonated oil, phenol derivatives, and other emulsifying agents. It is very efficient in its emulsifying properties, especially where mineral oil is present. It wets out the cotton, lowers the surface tension of the solution, and keeps mineral oil in suspension so that it does not adhere to the cotton when the goods are rinsed. Goods which have been kier boiled with caustic soda and the right type of penetrating agent will rinse better and require less rinse water. This is due to the fact that the penetrating and emulsifying agents permit the wash water to fall through the goods in a solid blanket-like form and not diffuse with the water in the goods. In other words, where an assistant has been used in the kier, each new rinse water forces the last bath out of the kier, rather than mixing with it and forcing part new water and part old water out of the kier. An assistant such as outlined above will improve the feel and handle of the waste, by reason of the fact that it does not allow the caustic soda to attack the cotton. In this way the formation of oxy-cellulose is prevented.

We would suggest a formula consisting of 35 lb. caustic soda and 15 lb. of the emulsifying agent. The waste should be boiled from six to eight hours. Eight hours will give cleaner work than six hours. The goods should be fastened down in the kier with burlap and held in place with chains. After boiling the requisite number of hours, the kier should not be drained from the bottom. Instead, the rinse water should be allowed to enter from the bottom, come up through the waste, and overflow at the top. This method will flush off any oil not held in perfect emulsion and will prevent oil from settling back onto the cotton. The washing from the bottom should be continued until the water overflowing is nearly clear. It might be suggested that chloride of lime made up with soda ash might be more effective than the straight chloride of lime solution. This calls for a bath composed of 10 lb. chloride of lime, 20 lb. soda ash, and 30 gal. of water. It is made up by stirring the lime into a smooth paste with 5 gal. of water and dissolving the soda ash in about 10 gal. of water. The two solutions are then mixed, water to make 30 gal. is added, and the white precipitate is allowed to settle. This stock solution is then further diluted to make the required strength.

The inquirer does not state that the waste is not soft enough when treated with the above process. If, however, a softer and better feel is wanted, the use of sodium bisulfite instead of sulfuric acid will give the desired results, and there will be no danger of tender goods from the use of any excess acid. If the goods are given two or three good rinses after bleaching, 2 to 5 lb. of sodium bisulfite will be sufficient to neutralize any bleach left in the cotton.

The dry cleaning may be effective as far as removing the oil, but it will not remove the pectins and other nonfatty matter. This must be done if the waste is to be used for cotton linters or absorbent material. In this event dry cleaning and then a kier boil will be necessary.

◆

Details on Dyeing Full-Fashioned Hosiery

Technical Editor:

In the Dec. 28, 1929, issue of TEXTILE WORLD *you carried an article "Dyeing Full-Fashioned Hosiery," by Farber. I read the article with much interest, and would like to ask the writer a few questions which he did not make clear in the article.*

1. The author states: "After working the goods in a cooling bath for 20 min., add 1 to 2% acetic acid to exhaust the bath." As all modern tubs (dyeing machines) have thermometers, I should like to know what temperature the bath should cool to in 20 min., and at what temperature it has been found most practical to add the acetic acid.

2. It is also stated that the dyes that are used are practically exhausted when the acid is added. I should like to know the kind of dyes that have been found most advantageous to use in this acid bath.

3. The author also gives the names of a number of dyes that are suitable for touching up the batch in the

last rinse, but the color letters are omitted from the names. I should like to know the source of these colors. *(7068)*

1. To what temperature the bath will cool down in 20 min. depends on the capacity of the machine and on the speed the drum revolves in the tub. The bath in a 25- or 50-lb. machine will cool faster than in a 200-lb. machine; and with the drum revolving at from 4 to 5 r.p.m., which we have found to be the best speed, the bath will cool in 20 min. to a lower temperature than if the drum rotates at the rate of 2½ to 3 r.p.m., which is the speed of most machines unless ordered for the higher speed. The acid can be safely added at a temperature of between 150° and 170° F., but the lower temperature is better.

2. This is a question that is rather embarrassing to answer. It would be unfair to all my good friends dealing in dyestuffs to discriminate in favor of any one. In the first place, in my article it was not stated that the dyes we use are practically exhausted when the acid is added, but simply that "the bath is in a nearly exhausted condition," meaning that the cotton has absorbed all that it is able to absorb in the cooling bath. Then it would be wrong to mention a dye that we consider good, and are using today, but may discard tomorrow. We are constantly on the lookout for better dyes, we get them from practically every dealer and manufacturer.

In our formulas we try to use no more than six dyes, and we have few with that many. When it is necessary to use more than that number of dyes, we look around for a dyestuff that will take the place of two or more, and limit the number of dyes in any shade to as few dyes as possible. Above all we do not buy any dyestuff that is found to be a mixture. Then we may be partial to a dye that in another mill would not do. I have had dealers in dyestuffs tell me that a particular dye we have used successfully for a number of years and that is used in other mills, has given considerable trouble in one dyehouse and had to be discarded. From this explanation it will be seen that in justice to all concerned it is better to omit the names of any particular dyestuffs.

3. In this case the reason I did not give the letter with the name of each color is that those I mentioned are all acid colors, well known, and readily procured from any responsible dealer or manufacturer. I mentioned them as an example of the type of dyes to be used in shading in the rinse or finishing bath. Some of these colors we have been using for a good many years and are still using, while some we have changed since the article was first written, substituting others which we think are better. The names and the respective letters of some of the dyes we use for touching up are: Fast Red S Conc., Azo Yellow A5W, Fast Silk Yellow G, Silk Orange A, Alphazurine A, Acid Green B, and Wool Violet 4BN.

FARBER.

◆

Shrinking of Linen Affects Selvage

Technical Editor:

We are sending you under separate cover a piece of linen, about 40 in. in length, with one selvage edge cut off and pinned to the center of the piece of goods. This piece of linen has been shrunk, but you will notice that the selvage did not shrink as much as the rest of the piece. Can you give us some explanation of this uneven shrinkage? *(7070)*

We are inclined to believe that the construction of the selvage on this line of goods is the cause of the body of the fabric shrinking more than the selvage itself. The inquirer does not state what type or method of shrinking process he has used. A little more descriptive line-up of the process and machinery used might be of assistance in arriving at the source of the trouble definitely, although we are of the opinion that the selvage itself is really the source of the difficulty.

◆

Rayon Takes Size Unevenly Due to Moisture Difference

Technical Editor:

My attention was drawn to the technical letter "Rayon Takes Size Unevenly," in the TEXTILE WORLD of Jan. 25, and I take it that from the two spools under discussion, one of which resisted the size whereas the other behaved normally, the manufacturer uses a bobbin-to-bobbin sizing machine.

A few years ago I was confronted with the same problem, and spent considerable time in solving this mystery. It was found out then that the reason for resisting the size solution was that the yarn was too dry at the time of running it over the sizing roller. It can easily be proved by experiment that it takes dry yarn longer to absorb water or any sizing solution. If you reel from one skein of viscose yarn two small skeins of, for instance, 50 to 100 yd., and dry the one and moisten the other, you will find when laying these two skeins on the surface of water, that the moistened one sinks immediately, whereas it takes the dry one considerable time to go down. When some sulfonated oil is introduced into the water, the dry skein will sink a little bit sooner, but there still remains a marked difference between the dry and the moistened material.

When running rayon over a bobbin-to-bobbin sizing machine, the contact of the threads with the sizing roller takes place in a very short period of time, and this is apparently too short to make dry yarn absorb enough sizing material. To cure the trouble, the manufacturer should see that his winding room has enough moisture. Excessive moisture in the air is not at all necessary, and 60% relative humidity will do excellently. At the same time, the manufacturer should take care that no bobbins or skeins are left near radiators, which in winter happens sometimes. I hope that this may help in solving the trouble.

J. A. VANLAER.

We undertake to answer, free of charge, to the best of our ability, questions pertaining to textile matters received from any regular subscriber to TEXTILE WORLD.

Inquiries should give the fullest information and data possible. In the case of damage to material, a sample should be sent. We do not undertake routine analysis of woven or knitted fabric construction, or investigation involving unusual expense.

All inquiries must be accompanied by the name of the person inquiring, not for publication, but as evidence of good faith. The identity of those seeking information on technical subjects will not be disclosed.

Letters expressing opinions or voicing criticism will be signed by the correspondent's name unless the letter itself contains a request that the name be withheld.

—EDITOR.

NEWS about MEN

B. B. GOSSETT, prominent textile executive of Charlotte, N. C., has been appointed a delegate by Gov. Gardner of that State to attend the meeting of the Southern Industrial Conference to be held in Little Rock, Ark., March 11-12.

J. C. DOBSON was re-elected president of the Dobson-Miller Corp., Pulaski, Va., manufacturer of hosiery, at the annual meeting held last week.

LEONARD A. YERKES, of New York, president of the Du Pont Rayon Co., and a director of E. I. du Pont de Nemours & Co., has been elected a director of the Seaboard Air Line Railway.

EDWARD FRESCHL, president of the Holeproof Hosiery Co., of Milwaukee, Wis., was recently elected a director of the Wisconsin Bankshares Corp., a statewide banking group formed recently.

THOMAS M. MARCHANT, head of the Victor-Monaghan group of mills, with headquarters in Greenville, S. C., has been placed on the executive committee of the South Carolina Tariff Association, recently organized at a meeting held in Columbia, to represent the manufacturers of South Carolina.

●

HUGO HUETTIG has succeeded REINHARD HUETTIG as president of the Paterson-Mutual Hosiery Mills, Inc., Paterson, N. J.

SHERMAN L. WHIPPLE, JR., president and general manager of the Chilton Co., Webster, Mass., and Mrs. Whipple, have returned from a vacation trip to Cuba.

H. J. HAYNESWORTH and J. F. GALLIVAN have been added to the board of directors of the Piedmont Print Works, Inc., Taylors, S. C.

JOHN BROADBENT of the Fashionmaid Hosiery Co., of Philadelphia, Pa., and OTTO SCHUSTER of the Blue Moon Hosiery Co., of Croyden, Pa., manufacturers of full-fashioned hosiery, sailed on Feb. 22, for a cruise through the West Indies.

SUMNER SIMPSON, president of the Raybestos-Manhattan Co., Bridgeport, Conn., has been elected president of the Bridgeport Community Chest.

GEORGE S. BARTON, president and treasurer of Rice, Barton & Fales, Inc., Worcester, Mass., and Mrs. Barton, sailed on the S.S. "Majestic" from New York on Feb. 22, for a short stay abroad.

DR. HOMER GAGE, president of the Crompton & Knowles Loom Works, Worcester, Mass., and Mrs. Gage, will sail from New York on March 1 on the S.S. "Biancamano" for two months of travel in Europe.

R. GRADY RANKIN, president of the Ridge Mills and secretary of the Hanover Mills, Gastonia, N. C., has announced that he is a candidate for nomination in the June primary as State Senator from Gaston County, N. C.

F. J. OESTERLE has succeeded IVAN O. HARLOW as manager of the Arnold Print Works, Renfrew, Mass. Mr. Oesterle joined the company as technical advisor in 1923 and has been superintendent of printing for the past year.

ROBERT STEVENS has been made a director of the Dunean Mills, Greenville, S. C.

J. K. VOEHRINGER, JR., president of the Mock-Judson-Voehringer Co., Inc., full-fashioned hosiery manufacturers, has been elected a director of the Sedgefield Country Club of Greensboro, N. C.

At the annual meeting of the Taber Mill, New Bedford, Mass., held Feb. 24, WILLIAM E. KERN, JR., was re-elected treasurer and clerk for the coming year. Directors re-elected were FREDERIC TABER, FREDERIC H. TABER, ABBOTT P. SMITH, ABBOTT M. SMITH, JOHN SULLIVAN, WILLIAM C. HAWES, ARTHUR D. DELANO, EDMUND W. BOURNE, WILLIAM S. COOK and MR. KERN.

All the old directors were re-elected at the annual stockholders' meeting of the Southern Bleachery, Inc., Greenville, S. C., held last week. H. R. STEPHENSON is president and C. C. GEER treasurer of this plant.

JESSE M. SHELTON and MCQUEEN AULD, who have been associated with Robert & Co., Inc., Atlanta, since 1917, have been elected vice-presidents of that organization, following a meeting of the board of directors of the firm.

FRED ROFF, vice-president of the Roff Knitting Mills, Cohoes, N. Y., is spending a several weeks' vacation in Florida.

Administrative committees of the Sewing Silks and Twists Division of the Silk Association of America, Inc., have been appointed as follows by A. A. ARNOLD, of Belding Heminway Co., chairman of the division: Executive committee, F. W. EATON, chairman, W. J. KENNEY, H. M. MERRIMAN; publicity committee, H. G. STINE, chairman, CHARLES B. GUDEBROD, W. J. KENNEY, W. T. RICE, L. M. STODDARD; small goods color committee, L. M. STODDARD, chairman, W. T. RICE, J. T. SLATTERY; pound goods color and standardization committee, L. P. STONE, chairman, CHARLES B. GUDEBROD, W. F. KENNEY, F. L. STANTON, H. G. STINE.

B. C. DUNLOP, who was acting plant manager of the American Bemberg and American Glantzstoff Corp., at Elizabethton, Tenn., following the death of acting president Kummer last October, has returned to his former duties at the New York office of American Glanzstoff Corp., since the appointment of CHARLES WOLFF as permanent plant manager on Jan. 20. It was erroneously reported that Mr. Dunlop had resigned.

●

Crompton & Knowles Loom Works, Worcester, Mass., held their annual meeting on Feb. 19, when RUFUS S. FROST of the cotton sales department was added to the board of directors. All the other offices were re-elected.

CHARLES E. HENDRIXSON, secretary and treasurer, Viscose Co., Marcus Hook, Pa., has been elected a director of the Corn Exchange Bank & Trust Co., Philadelphia.

DONALD D. LEONARD has become associated with H. C. Aberle Co., Philadelphia, in charge of their silk department. He will represent the corporation in the purchase, quality control and allocation of raw and thrown silk, dividing his time between Philadelphia and New York.

A. J. WRIGHT, chief textile designer and head of the weaving, dressing and burling department, the Hind & Harrison Plush Co., Clark Mills, N. Y., has resigned after 39 years continuous service with that company. He plans to make an extensive sojourn in the South.

●

At a meeting of the directors of Montreal Cottons, Ltd., Valleyfield (Que.) Can., a change was made in the set-up of the board. SIR CHARLES GORDON, who has acted as president, will now become chairman of the board, a newly created position. F. G. DANIELS was named president with SIR HERBERT HOLT as vice-president. A. J. WILSON was appointed secretary-treasurer with CHARLES GURNHAM as assistant. The other directors are: SENATOR H. DAN-

TEXTILE CALENDAR

Committee D-13, American Society for Testing Materials, Spring Meeting, Charlotte, N. C., March 13-14, 1930.

Southern New England Textile Club, New England meeting, Providence-Biltmore Hotel, Providence, R. I., March 15, 1930.

Southern Textile Association, Carders' Division, spring meeting, Clemson College, S. C., March 21, 1930.

Cotton Manufacturers Association of Georgia, Annual Meeting, Atlanta-Biltmore Hotel, Atlanta, Ga., April 3-4, 1930.

Southern Textile Association, Master Mechanics' Division, Spring Meeting, Charlotte, N. C., April 24, 1930.

International Exposition, Textile Exhibitors Association, Mechanics Building, Boston, Mass., April 28-May 3, 1930.

National Association of Cotton Manufacturers, Annual Meeting, Copley-Plaza Hotel, Boston, Mass., April 30-May 1, 1930.

American Cotton Manufacturers Association, Thirty-fourth Annual Convention, Carolina Hotel, Pinehurst, N. C., May 12-14, 1930.

Knitting Arts Exhibition, Commercial Museum, Philadelphia, May 12-16, 1930.

National Association of Hosiery and Underwear Manufacturers, Annual Meeting, Philadelphia, May 14, 1930.

National Knitted Outerwear Association, Annual Meeting, Toronto, Canada, June, 1930. (Exact date not yet set.)

Southern Textile Association, Annual Meeting, Ocean Forest Hotel, Myrtle Beach, S. C., June 27-28, 1930.

Ninth Southern Textile Exposition, Textile Hall, Greenville, S. C., Oct. 20-25, 1930.

Southern Textile Association, Semi-Annual Meeting, Poinsett Hotel, Greenville, S. C., Oct. 23, 1930.

DURAND, LIEUT.-COL. A. HAMILTON GAULT, W. C. FINLEY, JOHN P. BLACK and JOHN LOWE.

J. H. REANEY, general manager of the Union Mills, St. Johnsville, N. Y., has been made an honorary life member of the Fulton County Fish and Game Club in recognition of his generosity to the organization and its objects.

GEORGE E. LEIGHTON, agent for the Barre Wool Combing Co., Ltd., South Barre, Mass., has returned from a two months' vacation trip to his former home in Bradford, England.

JAMES M. MORTON, agent of the Norwich (Conn.) Mills of the American Woolen Co., has been appointed assistant agent of the Assabet Mills, Maynard, Mass. THOMAS HOPE, agent of the Moosup (Conn.) Mills will succeed Mr. Morton as agent of the Norwich. These changes become effective March 1.

JOHN W. CLARK, for many years building inspector for the Otis Co., Ware, Mass., has resigned to engage in another line of work on March 1.

CLIFTON W. BARTLETT was re-elected treasurer and clerk of the Dartmouth Mfg. Co., New Bedford, Mass., at the annual meeting of the corporation held Feb. 24. Directors re-elected were WALTER H. LANGSHAW, president; ALBERT C. LANGSHAW, GARDNER W. BULLARD, JOSEPH W. POWDRELL, ROBERT R. JENKS, HATTON LANGSHAW, MR. BARTLETT. JAMES W. ALLEN, ROBERT SIBOR and JOHN S. HOWLAND were re-elected committee on audit.

WALTER HUMPHREYS, secretary of the National Association of Wool Manufacturers, Boston, Mass., and secretary of the corporation of Massachusetts Institute of Technology, has been elected president of the University Club, Boston, Mass., according to an announcement made by the directors. He was graduated from Technology in 1897 and shortly thereafter was appointed registrar of the institute, a post which he held for 20 years.

●

CHARLES E. INCHES, former treasurer of the Androscoggin Mills, Lewiston, Me., was elected treasurer of the Lancaster Mills, Clinton, Mass., to succeed ROBERT R. WEST, resigned, and RALPH J. YOUNG, office manager at the plant was elected clerk of the corporation. These directors were elected: President, JAMES F. MURPHY, Treasurer, CHARLES E. INCHES, JAMES NORWELL, F. HAROLD GREENE, ROBERT AMORY, WALTER C. BAYLISS, and ALLAN MCNAB, president of the New England Southern Corp., all of Boston.

Announcement is made of the engagement of MISS HORTENSE FISTER, Milford, Mass., and BAYLIS G. ALDRICH, treasurer of the Forestdale (R. I.) Mfg. Co.

JOSEPH F. KNOWLES has been appointed treasurer of the Acushnet Mill Corp., New Bedford, Mass., succeeding ROBERT A. BARTLETT.

H. W. MOORE, treasurer of the Brown Mfg. Co., of Concord, N. C., was elected vice-president of the Southern Manufacturers Club, of Charlotte, at the recent annual meeting.

JOHN R. DODSON, treasurer of the Jantzen Knitting Mills, of Portland, Oregon, will sail from New York for England, about the middle of March, to complete arrangements for construction of a plant in London.

J. P. T. Armstrong, president of the Corticelli Silk Co., who became vice-president and a member of the board of the Champlain Silk Mills when Champlain acquired the business and plants of the spun silk department of the Corticelli Silk Co.

Z. T. CRANFORD, superintendent of the Dilling Cotton Mills, Kings Mountain, N. C., has been made superintendent of the Cora Mills, also.

A. B. CROSS has been made general superintendent of the Rock Hill (S. C.) Printing & Finishing Co. He is succeeded by JOSEPH ROBERTS as superintendent of the printing department.

THOMAS ARNETT has been made superintendent of the Oakleaf Mills, La Grange, Ga.

ISAAC DEKOYNER has been made superintendent of the Southern Worsted Corp., Greenville, S. C.

CARL R. HARRIS has arrived in Chester, S. C., where he has assumed his new duties as resident general superintendent of the Aragon-Baldwin Cotton Mills, Inc., with plants in Chester, Rock Hill, S. C., and Whitmire, S. C.

J. C. HOOKS, former superintendent of Chadwick-Hoskins Mill No. 3, has been promoted to the superintendency of the No. 1 and No. 2 plants. ARTHUR JARRETT, former superintendent of Charles Mills, Red Springs, N. C., will succeed Mr. Hooks at the No. 3 plant.

JOSEPH SYKES has resigned as mill superintendent of Malone (N. Y.) Woolen Mill and is succeeded by FRANK R. HANKEY, who was formerly boss weaver in the Lawrence-Webster Co.

Z. V. MODE, superintendent of the plants No. 1 and No. 2 of the Chadwick-Hoskins Mills, Charlotte, N. C., has resigned.

WALTER CANTRELL for some time overseer of carding in Mill No. 3 of the Hanes (N. C.) Co., just outside city limits of Winstom-Salem, N. C., has been transferred to the Hanes Knitting Mill, and GEORGE HAGAN, of Selma, N. C., has succeeded him at No. 3 mill.

A. B. COTHRAN, formerly of Lowell, N. C., is now overseer of the weaving department at Seminole Mills, Clearwater, S. C.

JOHN W. CLARK, for 25 years in charge of supplies, tenements and inspections and for the last year in charge of the order department of the Otis Co., at Ware, Mass., has resigned from the service of the company, to take effect March 1.

F. N. JACKSON, overseer of spinning at the Clinton (S. C.) Cotton Mills, has resigned.

●

ROBERT E. HORNE has taken the position as overseer of weaving for C. A. Caswell Woolen Mills, Bloomsburg, Pa. Mr Horne comes from Brookline, Mass.

R. H. LAYTON, head of the carding department of the Anderson (S. C.) Cotton Mills has resigned.

MICHAEL MCGLYNN, overseer of weaving for the National & Providence Mills, American Woolen Co., Providence, R. I., has severed his connections with this company. He is succeeded by JOHN R. REGAN, who was assistant boss weaver at this mill.

W. L. PAUL, overseer of weaving at the Stevens Mfg. Co., Burlington, N. C., for ten years, has resigned.

REID SUMMEY, night section hand in spinning at the Ruby Mill, Gastonia, N. C., has resigned.

FRED SMITH has resigned as overseer of dyeing at Strong, Hewat & Co., Inc., North Adams, Mass., after a service of 32 years.

J. E. SHAW, formerly of Cowpens, S. C., is now carding overseer at the Aiken Mills, Bath, S. C.

J. T. WHARTON, overseer of spinning at the Martha Mills, Thomaston, Ga., has resigned.

ROBERT A. WILKINSON, overseer of weaving at the Page Mfg. Co., New Bedford, Mass., for the last two and one-half years, has resigned his position. He had been with the Page for nine years, previous to which he was employed by the Gosnold Mills.

J. L. WILLIAMS has been promoted to day overseer of carding at the Anderson (S. C.) Cotton Mills.

GEORGE HAMMOND, superintendent of the shipping department, the Hind & Harrison Plush Co., Clark Mills, N. Y., and connected with the concern since it was brought to this country from England 40 years ago, has resigned. No plans for the future have been announced.

LEPRELET LOGEE, formerly superintendent of a cotton mill in Macon, Ga., and later with the Whitin Machine Works, Whitinsville, Mass., celebrated his 104th birthday anniversary at the Masonic Home, Charlton, Mass., on Feb. 5. He is the oldest member of the masonic fraternity in the United States.

CHARLES G. VOSS, JR., formerly second hand in spinning at the Dixie Mercerizing Co., Lupton City, Tenn., now holds a similar position in the carding department of the Standard-Coosa-Thatcher Co., Chattanooga, Tenn.

NEWS about MILLS

Cotton

Strowd-Holcombe Cotton Mill, Inc., Birmingham, Ala., has arranged for an increase in capital from 5,000 to 10,000 shares of stock, no par value.

Fairfax, (Ala.) Mills of the West Point Mfg. Co., are adding approximately 1,000 spindles and other equipment to their plant.

***Montevallo, (Ala.) Cotton Mills, Inc.** are nearing completion, and will begin operations at an early date, it is expected. They will contain 15,000 spindles and approximately 400 looms, and will give employment to seve ' hundred operatives.

Whittier Mills, Chattahoochee, Ga., are reported to be adding a considerable number of looms to their equipment.

Meritas Mills, Columbus, Ga., have increased their operating schedule to 55 hours day operation and 35% of their equipment is running 55 hours per week at night. This change was made Feb. 17.

Roswell (Ga.) Mills, Inc. are adding 5,000 spindles to their plant.

Pepperell Mfg. Co., Biddeford, Me., has given contract to the Gaston County Dyeing Machine Co., Stanley, N. C. for two additional kiers, with package containers.

***New Bedford (Mass.) Curtain Co.** is the name of the corporation organized to manufacture curtains and interior draperies in building belonging to the Wamsutta Mills on Logan St. & Acushnet Ave. This was erroneously reported as the **New England Curtain Co.** The company of the latter name has been operating for some years at Fitchburg, Mass.

***Merchants Mfg. Co.,** Fall River, Mass., has paid another liquidation dividend of 10%, amounting to $150,000. This makes a total of 35% paid to stockholders. The corporation was acquired by the Newman Syndicate.

***Nonquitt Spinning Co.,** New Bedford, Mass., is now operating the 250 Draper automatic looms installed on the top floor of No. 2 Mill, and the plant has been transformed from a yarn mill to a fine cloth mill. Ample room has been left for the erection of more looms if those now in operation prove profitable.

***Merrimack Mfg. Co.** and the **Boott Mills,** Lowell, Mass., have, it is said, entered into an agreement to take over Lowell plant of **Pepperell Mfg. Co.** which has been idle for many months. The Merrimack Mills make velour, velveteens and automobile cloth, while the Boott Mills make toweling, window curtains and similar materials. It is understood the mills will operate both the steam and power plants and will lease that part of the property not required for their own use.

Chautauqua Towel Mills, Inc., Jamestown, N. Y., have increased their capital stock from $200,000 to $225,000, in order to provide funds for expansion.

*Indicates previous mention of project.

Sapphire Cotton Mills, Brevard, N. C. will be sold on March 22 by Receiver H. E. Erwin.

Piedmont Spinning Mills Co., Gastonia, N. C., which has been idle for several weeks, was started up for a full time daylight run of at least four weeks, beginning Feb. 24, it was recently announced by Frank Goldberg, one of the owners of the mill, which is the smallest spinning plant in Gastonia.

Boger & Crawford Spinning Mill, Lincolnton, N. C., has purchased from the English firm of Dobson & Barlow, 4,000 spindles for spinning 200s yarns.

Consolidated Textile Corp., Raleigh, N. C., is overhauling the carding, spinning and weaving machinery and installing additional equipment for manufacturing furniture covering material, denims and playwear suiting. The mill recently added a six-roll combination calender.

Alfred Mills, Inc.—formerly the Savona Mfg. Co., of Charlotte, N. C.,—directors announce that the plant, which employs around 500 workers, will resume operations within the next few days, after several months shutdown. The new company was recently formed to take over the affairs of the plant. Its officers are: Alfred Jepson, president; Stuart Pratt of New York, vice-president, and Fred Taylor, secretary-treasurer.

Scranton, (Pa.) Lace Co., is looking over property in various Ontario and Quebec cities for the purpose of establishing a branch factory in Canada. The company will manufacture lace draperies, bedspreads, colored draperies, etc.

Anchor Webbing Co., Pawtucket, R. I., has arranged for a decrease in capital stock from $400,000 to $275,000.

Wool

Raybestos Co., Bridgeport, Conn., has placed one of its mills on a maximum production schedule, operating 24 hr. per day with full working quota, and will hold to this schedule for a number of weeks to come.

Pondicherry Woolen Co., Bridgton, Me., has advanced manufacture at its local mill, and is now giving employment to a night shift, to be continued until further notice.

Georges River Woolen Mills, Warren, Me., stockholders voted to liquidate at a meeting Feb. 22. The plant comprises 30 broad looms, 2 narrow looms and 2,380 spindles. It has been operated 50 years and manufactures cheviots, overcoatings and dress goods. Other woolen interests may take over the plant, which has two water power systems.

Lawrence Felting Plant, Millville, Mass., has been sold by the U. S. Rubber Co., and the plant will be used for dyeing, as that department from the Malden, Mass., branch plant of the company has been removed from Malden to Millville. Thomas H. Fitzgerald has been appointed in charge.

Dufton Bros., Spencer, Mass., have shut down during the installation of a new boiler.

Stone Mill Co., West Medway, Mass., has resumed operations after a two weeks' shutdown for repairs on the machinery.

Hightstown (N. J.) Rug Co., is installing new looms and other equipment at its mill, designed to increase production about 25%, and will place operations on the advanced basis as soon as work has been completed. The mill is running on a full schedule.

***Buffalo Spinning Mills,** Clarence, N. Y., have installed four sets of wool cards and 1,700 mule spindles for manufacturing wool and merino sweater yarns.

Premier Worsted Mills, at Bridgton, R. I., will immediately add new workers in all departments of the plant.

Sydney Worsted Co., Woonsocket, R. I., has awarded contract for one-story addition to its plant which will be 50 x 70 ft., to be used for storage of finished goods.

Knit

Real Silk Hosiery Mills, Indianapolis, Ind., opened a new cafeteria for employes on Feb. 17, recently completed at an estimated cost of about $50,000.

Brilliant Silk Hosiery Co., Inc., Bloomfield, N. J., has filed a petition in the Court of Chancery, Trenton, N. J., for release from an agreement to enter into the recently formed merger, known as the **Interstate Hosiery Mills, Inc.,** in conjunction with the **Finery Silk Stocking Co.,** Clifton, N. J., and the **Lansdale (Pa.) Silk Hosiery Co., Inc.**

***American Rayon Products Co.,** with plants at Brooklyn, West New York and Union City, N. J., which recently went into voluntary bankruptcy, will liquidate the business in bankruptcy.

Faith Mills, Inc., Averill Park, N. Y., is the new name of **Faith Knitting Co.,** manufacturers of worsted and wool sweaters, men's ribbed wool underwear, etc.

Gilbert Knitting Co., Little Falls, N. Y., is now operating near capacity with some additional workers.

Yund, Kennedy & Yund, Amsterdam, N. Y., have filed notice of an increase in capital stock to $750,000 under incorporation articles which lists as directors, T. J. Yund, E. T. Kennedy, W. R. Dougan and E. H. Dougan.

Gardiner & Warring Knitting Co., Amsterdam, N. Y., has leased its former plant to the Twentieth Century Aircraft Corp. for manufacturing purposes.

New Hartford (N. Y.) Knitting Co. is now operating on full time weekly schedules in virtually all departments.

Ashe Knitting Mills, Rensselaer, N. Y., are maintaining capacity operations with an enlarged working force.

Wear Knitting Co., Tryon, N. C., appointed Charles O. Smith as trustee at a recent meeting of the creditors. An effort is being made to have the plant leased and operations resumed.

Wendell (N. C.) Hosiery Mill Co., plant was completely destroyed by fire Feb. 22, with an estimated loss of $25,000 to $35,000, which was partly covered by insurance. The plant was equipped with 135 knitting machines for the production of seamless half hose. J. Ashley Wall, of Wendell, is secretary and treasurer of the company.

Hill-Apperson Hosiery Co., Winston-Salem, N. C., has been issued a charter to conduct a manufacturing, buying and selling business with a paid in capital of $40,000. W. P. Hill, T. B. Apperson, Jr., and L. C. Apperson are the incorporators.

McPar Hosiery Mill, Marion, N. C., recently purchased a hosiery dyeing machine of 50 lbs. capacity, manufactured by Smith. Drum & Co.

Jantzen Knitting Mills, Portland, Ore., have plans under way for the construction of proposed new mill at London, England, where tract of land was recently acquired, and propose to begin erection early in the spring. The initial plant will total about 22,500 sq.ft. of floor space.

Resolute Knitting Mill, of Philadelphia, Pa., manufacturer of children's hose, has been bought by the **Spalding Knitting Mills** and moved to Griffin, Ga. The machinery of the Philadelphia plant is new and was moved as a whole into the addition recently built by the Spalding mills. The addition of the Resolute plant increases the Spalding mills capacity a third and gives employment to 125 additional people. R. P. Shapard and his son, R. P. Shapard, Jr. are owners and operators of this company. The Spalding Knitting Mills are running full schedule of 60 hours a week.

Trio Knitting Co., Philadelphia, Pa. It is reported plans are being made to change the name of this concern to **Mayfair Knit Wear Corp.,** continuing at the present location at 77 Wister St., where a complete line of outerwear will be manufactured. It is reported interests identified with the **Paragon Knitting Mills,** Germantown, are interested in the new concern.

Victor Silk Hosiery Co., Philadelphia, Pa., care of the W. P. Cameron Engineering Co., 4850 Mascher St., Philadelphia, architect and engineer, is taking bids on revised plans for a new knitting mill at New Britain, Pa.

Wagner Hosiery Mills, Curwensville, Pa., recently organized to operate a local knitting mill, will be represented by J. Thomas Dale, Curwensville, treasurer.

Reading (Pa.) Full-Fashioned Hosiery Mills, Inc., will purchase 27 new 45 gauge machines for the manufacture of four-strand picot top stockings. The mill is turning out about 150,000 dozen pairs a year.

***Stitchbound Hosiery Mills, Inc.,** Reading, Pa. Complete liquidation of this plant is under way, including real estate, stock, machinery and equipment.

Morristown (Tenn.) Knitting Mills, Inc., recently completed an addition to their plant and have installed 35 new Scott & Williams Model B-3 machines for the manufacture of 320-needle hose. Ten loopers were added also.

Portage (Wis.) Underwear Mfg. Co., will not move from the city, despite rumors to the contrary, according to George Moeller, president and manager of the concern. The mill has been closed recently because of seasonal dullness, it was stated. The cutters have started work and the plant will be running full time again shortly. The company is moving its offices to Chicago.

Richmond Hosiery Mills, Ltd., London (Ont.) Can., have completed a $5,000 addition to their plant on Ridout St., which they will soon occupy.

Elliot Mfg. Co., Ltd., Peterboro (Ont.) Can., has become part of **Knitters, Ltd.,** Marieville, Que., and will continue operations under the latter name but without change in personnel. The company started operations in Peterboro in 1926 manufacturing worsted yarns. Albert Barton is manager of the plant.

Silk

New Bedford (Mass.) Silk Mills closed Feb. 24, prior to removing equipment to plant of the **Foremost Fabrics Corp.,** at Lebanon, Pa.

Huguet Silk Co., Hornell, N. Y., has revised plans nearing completion for addition to mill, estimated to cost close to $10,000, with equipment, and will begin work at an early date. Pierce & Bickford, 215 West Water St., Elmira, N. Y., are architects.

Belmont Silk Mills, Inc., Shadyside, Ohio, near Wheeling, W. Va., recently formed for manufacturing broad silks, have installed 200 box looms. T. J. Mitchell is president and W. B. Starkey treasurer.

Lehigh Valley Silk Mills, Williamsburg, Pa., have resumed operations with 95 employes. As soon as machinery can be installed, the company plans to change its operations from silk to rayon manufacture.

Rayon

American Bemberg Corp., Elizabethton, Tenn., has curtailed production about 15%, releasing a number of employes. The reduced schedule is expected to be operative for several weeks.

Tubize Artificial Silk Co., Hopewell, Va., has leased a building of the American Hardware Co., at Petersburg, Va., and will install equipment for coning a relatively small amount of its production, it has been announced by R. C. Jones, assistant to the president. About 150 new operators will be necessary.

Finishing

Apex Piece Dyeing Co., Paterson, N. J., has taken bids for proposed two-story rear addition to dye house on Wayne Ave., 60x80 ft., and is said to be planning to begin work at an early date. John C. Van Vlandren, 140 Market St., Paterson, is architect.

Commercial Piece Dyeing Co., Paterson, N. J., has filed notice of organization to operate in New York, with capital of $250,000.

United Piece Dye Works, Paterson, N. J., are said to have offered to assist the city in connection with its sewage problem, furnishing a 10,000,000-gal. capacity tank at its Hawthorne plant, across the Passaic River from Paterson with pipe line connecting with the Passaic Valley sewerage system. The tank would be given to the city in return for the use of 2,000,000 gal. of water per day at the Hawthorne plant, taken from Paterson's allotment in the trunk line.

Miscellaneous

***National Rhea Co.,** Putnam, Conn., will offer its property for sale first as a whole and then in separate parcels, and the method of sale bringing the most satisfactory results will be accepted by the receiver.

Diamond Braiding Mills, Chicago Heights, Ill., have arranged for an increase in capital from $300,000 to $500,000.

Novelty Mfg. Co., New York, manufacturing bedspreads and draperies, is transferring its plant to Burlington, N. C., where equipment is being installed in quarters leased in the Mayfair Mills building.

Asbestos Spinning & Weaving Corp., Waterford, N. Y., is increasing operations by enlarging its working force.

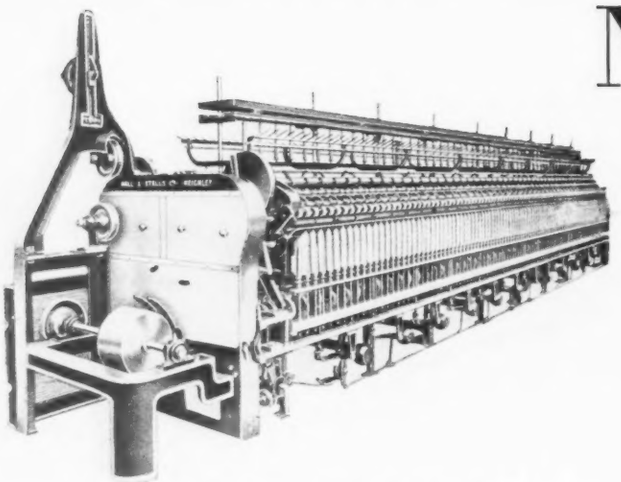
Darlington Fabrics Corp., Charlotte, N. C., is installing 30 additional looms shipped from the Pawtucket, R. I., plant, for use in the manufacture of tapestries. Production of the new line is expected to begin within the next two months. The plant is now producing draperies and jacquard novelties. About 250 persons are employed.

Philip Carey Mfg. Co., Lockland, Ohio, manufacturing asbestos goods, has purchased a tract of about seven acres of land on 58th St., Philadelphia, Pa., fronting on the Schuylkill River, as site for a new mill, for which plans will be drawn at an early date. The initial plant will consist of several units, reported to cost more than $250,000, with equipment.

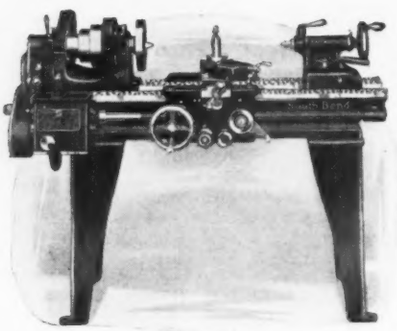
Carter Bros., Chattanooga, Tenn., who have been doing business for a number of years as a partnership, were issued a charter of incorporation in Tennessee recently as **Carter Bros. Inc.,** with an authorized capital of $400,000. They manufacture "Retrac" rugs, bath mats, mattresses, etc. Stock is all owned by Carter Bros. Officers of the company are: A. J. Carter, president; P. L. Carter, vice-president and treasurer; and J. A. Carter, secretary. The officers of the company and John S. Fletcher, local corporation lawyer, constitute the board of directors. The company plans to expand its activities toward the last of this year.

*Indicates previous mention of project.

New Machinery a



Worsted Cap Frame Which Spins From Dry-Combed Twistless Rovings



Lathe for Precision Machining

Cap Frame Spins Dry-Combed Twistless Rovings

TWISTLESS, dry-combed rovings are usually spun on the mule or ring frame. A new Hall & Stells cap frame for this purpose, however, has recently been introduced to this country by H. Edward Jefferson, 620 South Delaware Ave., Philadelphia. It is stated that the frame is suitable for spinning 30s to 80s counts. Compared with the mule, it requires less floor space and skilled labor. The builders state that the cap-spun yarn, whether in medium or fine counts, compares very favorably with mule-spun yarn.

The frame is built double sided, and in various lengths to suit the floor space available. The usual pitch is 3 in., but larger pitch may be had if desired. The creel is constructed with two tiers for two rows of single or double roving bobbins from the finishing rover (French drawing). Wooden creel pegs, which run in porcelain footsteps fixed in wooden laths, carry the roving bobbins.

The drafting mechanism is carried at an angle of 47½° to the vertical axis of the spindle. This angle allows the twist to run as near as possible to the nip of the front rollers, diminishing the chances of breakage of the yarn, while allowing the free weight of the press rollers to assert themselves on each corresponding bottom roller. The drafting mechanism consists of five rows of fluted rollers, the usual diameters of which are: 32, 32, 32, 18, 32 mm. The front roller (32 mm.) and the small carrier roller (18 mm.) are casehardened all over; the three others, at the necks only. The hardening of all necks is undertaken for the purpose of retaining alignment.

The roller stand is designed to carry the front roller and the third and second carrier in a fixed position, while the back roller and the first carrier are adjustable, allowing a variation of ratch from 5 in. to 10 in. There are steel top back rollers, three rows of steel top carriers, and wood top front rollers. The wood top front rollers may be covered with a medium-soft chrome leather or a medium-heavy botany felt of fine texture, on the top of which parchment is glued.

Behind the back rollers are twist guides, fixed on an iron rod having a traverse motion, the length of which can be regulated. When working extremely short wool, it is necessary to remove the first pair of carrying rollers, only employing two pairs; while when working crossbred and common wools, the full complement of three pairs of carriers is required.

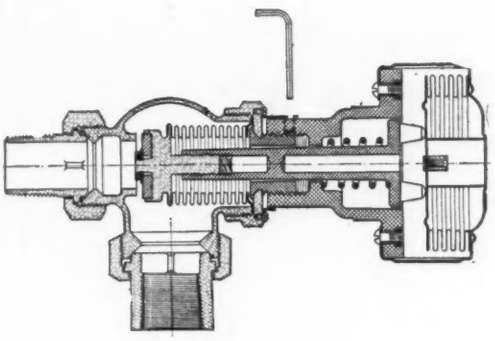
The press rollers of all the fluted rollers, with the exception of the front rollers, act by their own weight. The weighting of the front rollers takes place by levers and weights, exerted or removed the entire length of the frame at one operation. This is achieved by cams which come in contact with the weighting levers. The operating of the cam shaft is by hand and made easy by worm and wheel motion fitted at the end of the machine. This method of weighting not only provides equal pressure on every roller boss, but helps to preserve the life of the rollers. The pressure is easily removed every night, and this prevents flat places from forming on the roller bosses.

Plush-covered cleaning rollers are placed on the top of the front rollers to gather up any waste. Felt-covered rubbers keep the front roller and the small carrier roller free from waste and dirt. A plush-covered roller presses against the bottom of the front roller and serves as a catching-up roller, its duty being, as the name indicates, to catch up any broken ends, thereby preventing roller laps or the possibility of double yarn. Immediately an end breaks it is caught up and conveyed to a plush-covered gathering roller, the waste being collected from this at the spinner's convenience.

The usual type of cap, spindle, and tube is employed. Spinning takes place on a 6-in. paper tube, and conical caps are then used. The cylinder shaft is carried on ball bearings, which are complete with lubricating arrangement. The speed of the cap spindle may vary from 5,500 to 8,500 r.p.m. according to the count of yarn and the quality of wool.

At the gearing end a brake on the cylinder shaft stops the cylinder dead the moment the driving belt is passed from the fast to the loose pulley. This mechanism avoids the formation of snarls and breaking down of ends through soft twist, caused by the supplementary rotation of the spindles, due to the inertia acquired by the drive of the cylinder. A clutch enables the rollers to be thrown out of gear every time the machine stops. When the machine is put in motion, the spindles revolve first and the rollers are thrown in gear when the yarn has attained its full ballooning speed, thus avoiding the

and Processes



Cross-Section of Automatic Radiator Valve

breakage of the threads and preventing snarling. This mechanism is controlled by the starting handle of the machine and can be accurately timed.

Lathe for Precision Machining

A NEW 9-in. lathe has been introduced by the South Bend Lathe Works. Like the previous lighter models of 9-in. lathes, this machine is a back-geared screw-cutting precision tool. Its design, however, makes the new lathe a distinctly different machine.

The lathe is designed for precision machining in the manufacturing plant, tool room, machine shop, service shop, and engineering laboratory. Some of the specific uses of the lathe are for the production of machine parts, for fine gage work and tool jobs, and for fine tap, die, and instrument making. It is also employed for refacing valves, finishing pistons, and other service-shop jobs.

The principal improvement on the lathe is a new headstock with a 1¼-in. three-step cone, which is said to deliver 25% more power than was possible on the earlier models. Another outstanding change is provision of a new back-gear-shaft oiling system that positively protects the shaft from harmful effects of neglect or careless lubrication. Easier and better oiling of spindle bearings is also provided, and the spindle carries a new seal that prevents accumulation of oil on the outside of the headstock.

Other improvements include the new gear guards, which strengthen the headstock casting; and a new means of securing the headstock to the lathe bed to insure permanence of alignment of the headstock spindle.

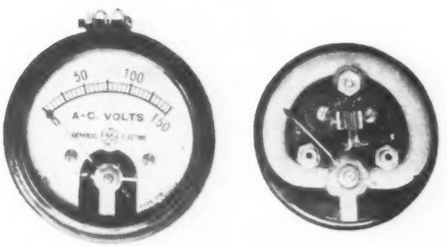
The lathe is available in several styles and sizes, and with either countershaft or motor drive.

Automatic Radiator Valve

THE FULTON SYLPHON CO. has announced a new automatic radiator valve designed to simplify air-conditioning problems. This valve, No. 875, is a departure from the old-style valve in that it is a combination packless radiator valve and temperature-control unit. Installed like any of the ordinary radiator valves it is suitable for any two-pipe steam-heating system using either floor or ceiling radiators. The valve is thermostatically operated and gradually throttles the steam supply to individual radiators to meet the temperature changes within the room. It is stated that the valve is simple to install, is accurate in functioning, and results in fuel economy. By turning the valve head to any desired point, the flow of steam is regulated and the temperature of the room is said to remain constant.

The valve is of the packless type, utilizing the Sylphon bellows to replace the customary stem-packing, and is designed to give a practically frictionless valve action without leaks. A special-composition brass is used in the construction of the valve. Unions are provided for both inlet and outlet connections in order to facilitate installation.

Portable Miniature Voltmeter



Miniature Voltmeter

Voltmeters and Milliammeters

SMALL voltmeters and milliammeters, in 2¼ and 3-in. cases, for use on both a.c. and d.c. lines have been introduced by the General Electric Co. The meters have moulded compound cases and bases, the cases being threaded so as to screw on the base.

These small-size D'Arsonval instruments are equipped with full-wave copper oxide rectifiers mounted within the case. The rectifiers permit the instruments to be used on a.c. circuits, and thus make it possible to provide a.c. instruments in low voltage and current rating having the high sensitivity, low power consumption, and damping of the D'Arsonval element. The voltmeters are available in ratings from 2 to 150 volts, and the milliammeters in ratings from 0.5 to 15 milliamperes.

The panel-type instrument in a 3-in. case is designated as Type DO-14X, the one in a 2¼-in. case as Type DW-1X. A portable voltmeter, similar to Type DW-1X, but with a rectangular sub-base, a double-range 10/500 volt scale, and a knob for adjusting to read either a.c. or d.c., is designated as Type DW-2X. The instruments have numerous applications where the power for operating the instruments is very small.

DURENE

REG. U.S. PAT. OFF.

NATURAL, BLEACHED AND COLORED

YARNS

MAIN OFFICE

123 SOUTH BROAD STREET

PHILADELPHIA

Manning St.
HIGH POINT, N. C.

432 Fourth Ave.
NEW YORK

418 Franklin St.
READING, PA.

323 So. Franklin St.
CHICAGO, ILL.

James Building
CHATTANOOGA, TENN.

52 Chauncy St.
BOSTON, MASS.

HAMILTON, CANADA

LOS ANGELES

MILLS

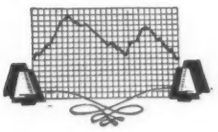
CHESTER, PA.

BELMONT, N. C.

ABERFOYLE MANUFACTURING COMPANY

Representatives in All the Principal Countries of the World

TEXTILE WORLD ANALYST



No Nearby Recovery Foreseen in Cottons

Average Cotton Price for Rest of Season Likely to Be Lower Than 16c., Says Dr. Haney

SUMMARY

Statistical data suggest an average price on cotton for the balance of the season of between 15½ and 16c. Yarn and gray goods markets still lack fundamental strength and do not seem likely to show sustained recoveries for several months.

•

The analysis and forecast by Dr. Lewis H. Haney, Director, New York University, Business Research Bureau, which regularly appears on this page, considers various branches of the textile industry from week to week. The conclusions reached in the Analyst are mostly forecasts and generally apply to a time two or three months ahead. The Analyst is based on statistical data and does not reflect temporary trade sentiment.

WHILE all recognize that the outlook for the new cotton crop will soon become a factor in the market, that factor is one which we are at present entirely unable to discount. There may be a reduction in acreage amounting to 5% but at the same time there may be an increase in yield that would more than offset the reduced acreage. We must, therefore, ignore this factor in any attempt to base conclusions upon known facts.

It is highly important to understand why cotton prices are what they are, and to this understanding it is essential to remember the declining trend of the general level of commodity prices. We may reason this way: The general level of commodity prices is at least 4% lower than it was a year ago. The February average price of spot cotton at New York was 20.22c. a year ago. If we reduce that price by 4% we get an adjusted cotton price of 19.4c. Now let us allow for the larger supply. The total supply in the United States available for the balance of the season on Feb. 1 was about 9.2 million bales. This compares with about 7.9 million bales a year ago, which makes an increase of 1.3 million bales. Such an increase in supply would ordinarily mean a decrease in cotton prices of about 2½c., assuming no change in demand, and 2½c. from 19.4c. is 16.9c. This we may consider as roughly approximating the price that would be arrived at by allowing for changes in the purchasing power of money and in the supply of cotton during the last twelve months.

But in addition, we must remember that the demand for cotton has decreased as indicated by the lower replacement margins of cotton manufacturers and reduced mill consumption. United States spinners' takings are about 145,000 bales below a year ago. It seems that this condition is amply sufficient to explain prices at least 1c. lower than 16.9c. These are the conditions which explain the present market.

The recession in cotton prices (like the recession in wheat, wool, and other commodities), marks a return to a sounder competitive price basis and encourages the hope that a base for stabilization may be reached before many months have passed. Many economists have been looking for such a recession as a phase of the post-war liquidation. Precedent would suggest that upon the completion of this phase we may hope for the beginning of the real post-war recovery.

As to the outlook for cotton prices, the foregoing figures together with other reasoning that will follow, suggest that the average prices for the 1929-1930 season will be a little over 16½c. but under 17c. (spot middling cotton at New York). If this conclusion is correct, it will be necessary for the price to run around 15½c. during the balance of the season. Only one development seems capable of greatly affecting this conclusion, namely, the possibility of some great change in the prospects for the crop of the coming season.

Bull Points — Conditions tending toward strength in the cotton market are:

1. The active propaganda to reduce acreage, notably in Texas, by restricting farm credit; the decline in prices, and the poor financial condition in many sections of the South, increase the chances that this propaganda will be successful.
2. Farm work backward in the South.
3. Increased mill consumption and spindle activity in January.
4. Foreign stocks of American cotton below a year ago and port stocks small at several points.
5. Stocks of standard cotton cloth decreased in January.
6. The price of cotton is now in normal relation to the general average of commodity prices and about as low as statistical indications would justify.
7. A large short interest seems to exist among cotton merchants (chiefly affecting the higher grades).

Bear Points—The less favorable factors affecting cotton prices are as follows:

1. The declining trend of commodity prices in general continues.
2. The drop in silver affects unfavorably business in the Orient and in South America, and political disturbances in China and India make things worse.
3. Foreign cottons are relatively lower than American cotton of similar grade.
4. A lower world consumption for the current season is now definitely

AMERICAN
YARN & PROCESSING COMPANY

Main Office and Mills

Mount Holly, N. C.

MERCERIZED YARNS

High Grade Combed and Carded
All Counts and Put-ups

Sales Representatives
For Northern States and Canada

WATERMAN, CURRIER & CO., INC.
Boston, New York, Philadelphia
Chicago, Reading, Pa., Utica, N. Y.

H. B. KETCHUM
Mgr. Exporting Dept.
Mt. Holly, N. C.

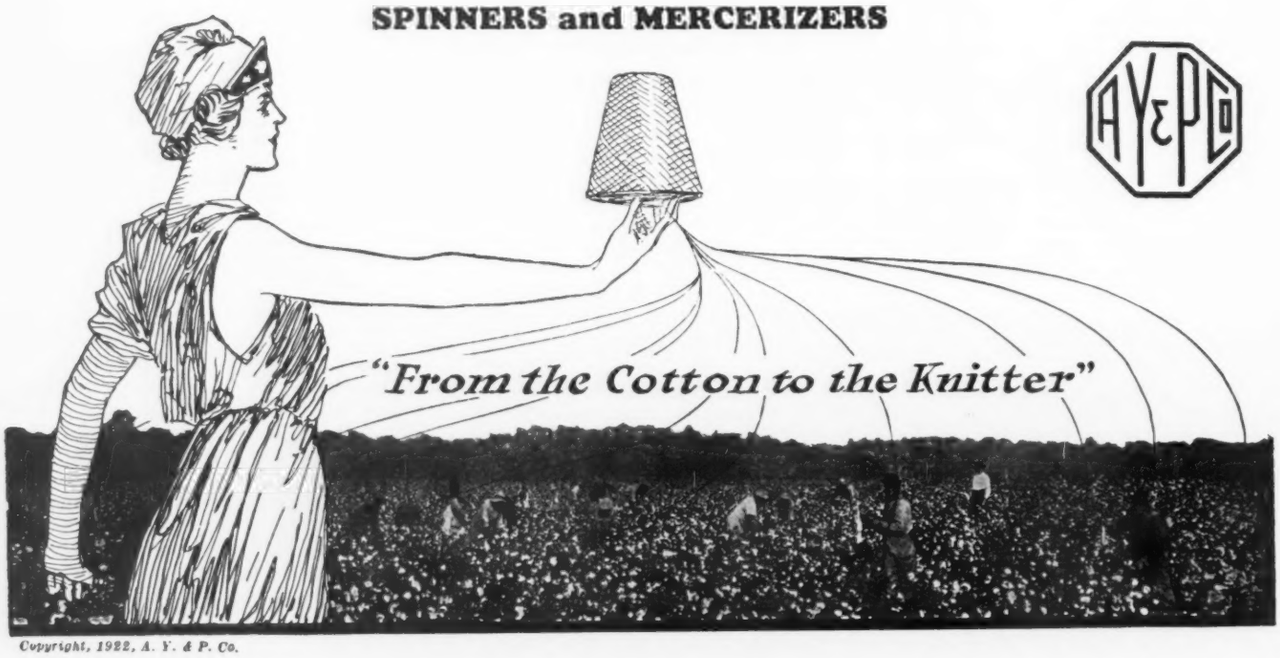
H. B. ROBIE
93 Worth St.
New York

For Southern Territory

TOM MOORE
502-3 Provident Bldg.
Chattanooga, Tenn.

E. J. HOLBROOK
High Point, N. C.

SPINNERS and MERCERIZERS



Copyright, 1922, A. Y. & P. Co.

accepted, world consumption of American cotton being estimated at around 14½ million bales.

5. European cotton textile business is depressed, with yarns dull and the spot demand poor; Japanese spinners are reported to be curtailing 17% from now to August.

6. Southern spot markets very dull.

7. Domestic mills well supplied.

8. Tire fabric consumption the lowest since 1923.

9. Cotton manufacturers' margins declined in January and continue low.

10. January cotton textile production exceeded sales; unfilled orders decreased 9.2%.

There seems to be nothing in the balance of the foregoing points to suggest anything more than temporary rallies in the cotton market, except the possibility of a sharp reduction in acreage.

Statistical Position — The statistical position shows relatively little change, but is slightly less favorable. Our estimate of the total disappearance of cotton for the season remains unchanged at 13.6 million bales, which continues to suggest a domestic carry over closely approximating 4,000,000 bales.

Exports are now about 800,000 bales behind last season and interior stocks about 400,000 bales larger. World spinners' takings are reported to be 788,000 bales behind last season and 460,000 bales behind the season preceding that. The world visible supply of American cotton at 5,267,000 bales is larger than in either of those years.

Our first chart shows that the manufacturers' replacement margin declined in January and was lower than in any month since the middle of 1928. This indicates that there was no improvement in the ability of the average manufacturer to get a profitable spread over his raw material.

The average daily mill consumption in January increased more than seasonally, our adjusted index averaging 103.6, against 93 in December and 109.5 a year ago. This is a good recovery and is in line with spindle activity, but it is not clearly based upon any proportionate improvement in demand. As long as the markets for cotton textiles are no stronger and cloth production exceeds sales, while shipments eat into unfilled orders, we must conclude that it is doubtful whether increased production is justified.

In any case, the supply of raw cotton is more than ample, even in comparison with the increased mill consumption. The average monthly supply for the balance of the season is high in comparison with the rate of mill consumption, just as it has been in previous periods of price weakness.

We conclude that there is no statistical basis yet apparent for a higher price level.

Present conditions are not exactly similar to any recent period, but are somewhat similar to those found in early 1926. Some similarity also exists between the present conditions and those in early 1927. The present supply lies between the supplies found in these periods. The average price for the two seasons, 1925-1926, and 1926-1927, was about 17.8c. General commodity prices have decreased in the meanwhile 6.6% and if we allow for this by deducting 1.2c. we get a figure of 16.6c. There may be some sense in considering this figure as a possible average price for the current season. As already noted, however, if that conclusion be accepted, we must look for prices fluctuating around 15½c. from the beginning of February, since the market averaged 17.65c. in the first half. Table I shows the position for several seasons.

TABLE I

	Crop (000500 lb. Bales)	Ginnings to Jan. 16 (000 Run. Bales)	Total All Cotton Available Feb. 1 Mil. Bales)	Feb. Average Price	Season Average Price
1929-1930	*14,919	14,188	9.2	15.56	**17.65
1928-1929	14,478	13,889	7.9	20.22	19.65
1927-1928	12,956	12,501	8.5	18.36	20.33
1926-1927	17,977	16,616	11.4	14.11	15.07
1925-1926	16,104	15,499	9.3	20.60	20.52
1924-1925	13,628	13,307	6.9	24.70	24.74

*Estimate. **To date.

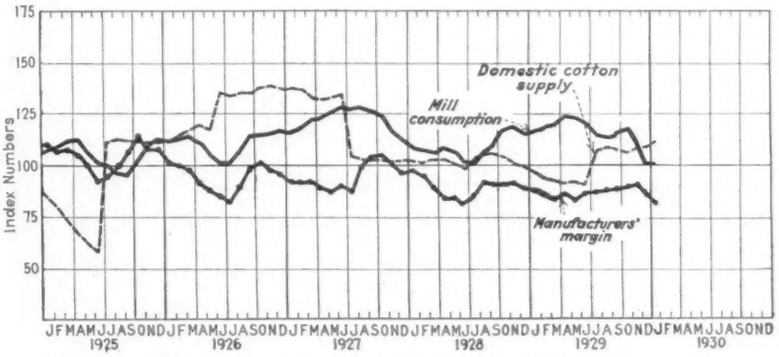


Fig. 1. GENERAL COTTON BAROMETER: Consumption—Average Daily Adjusted for Seasonal Variation, three-month moving average; Manufacturers' Margin—Average of Replacement Margins; Average Monthly Available—Net Domestic Available for Crop Year Adjusted for Seasonal Variation. 1921-1926 = 100 for all indexes.

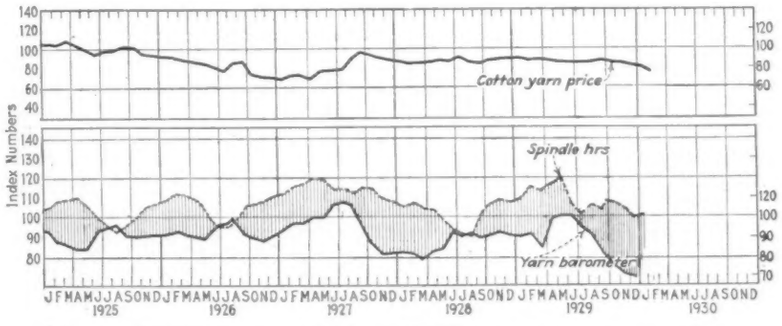
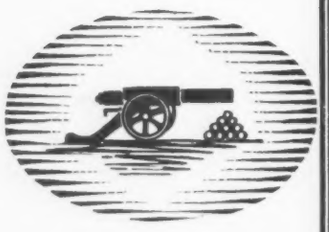


*Fig. 2. COTTON YARN BAROMETER: Cotton Yarn Price—*TEXTILE WORLD *Index. Spindle Hours—Three-month moving average (Dept. of Commerce). Yarn Barometer—Based on orders from cotton cloth. Average of recent years = 100 for all indexes.*

Yarn and Gray Goods Continue Weak.—Yarn prices in January averaged 79.9% of the 1921-1925 average, which compares with 82.3 in December and 89 a year ago. The yarn market has been relatively stronger than gray goods for over a year. Our fears of a large decrease in gray goods prices, expressed several months ago, have been more than realized. As a result of the sharpest decline since early 1924, the average prices in December first broke through the 1926 low level and then through the lowest level reached in 1921. In January gray goods averaged only 64.2% of their 1921-1925 level, a decline of 14% from the December average.

Both yarn and gray goods barometers fail to show favorable indications. We can find no statistical basis for sustained recovery in the yarn markets and it seems probable that no substantial improvement will appear until spinners' margins have been reduced further, thus compelling a more drastic curtailment.

Nor do we see any definite hope of sustained recovery in gray goods prices



"Write your own ticket"

Cannon blanket yarn contracts are highly popular with mill men. These permit you to draw on a varied scale of numbers just as your current needs dictate. In other words, on yarn bought today, you can specify actual numbers 60 to 90 days hence.

Such service is decidedly useful in these days of varied yarn needs. Take advantage!

CANNON MILLS
INC.
PHILADELPHIA

New York Providence Boston
Reading, Pa. Chicago Utica, N. Y.
Chattanooga Kannapolis, N. C.
Hamilton, Ont., Canada

Sales Agents
EWING-THOMAS CORP.
Mercerized Yarns and Thrown Silk
AMERICAN ENKA RAYON
IMPORTED DUTCH ENKA RAYON
for the Southern States

CANNON YARNS

before August, when we are expecting general recovery in the textile industry.

Wholesale dry goods sales are down, and below normal. Orders for finished cotton goods declined in December. Spindle activity is above indicated current requirements. Neither the statistics published by the Cotton Textile Merchants' Association, nor those covering carded sales yarns, indicated any significant improvement in January.

The Textile Trend

COTTON Textile Markets—Buyers and sellers of cotton goods have focused their attention this week on the cotton market which has dipped into new low ground for the year. Goods transactions have been at low levels. Prices on the whole have tended downward, although there were signs of firmness from time to time as cotton showed signs of rallying. New sheeting and pillow-case lists are expected to show only minor revisions.

Wool Goods Markets—While the staple price revision by the American and other factors who had attempted to stabilize the market served to clear the air in some respects, it gave an air of disquietude to the wool-goods market. It has been seized by sharpshooters as another means to gain their end, although they know perfectly well the market has not "broken open." Business has been very draggy, and fancy openings are not expected until after Mar. 3.

Knit Goods Markets—Warm weather stimulated outerwear call; bathing-suits and fancy sweaters in active demand. Hosiery outlook improved, following clearance of "bargain merchandise." Lightweight underwear lines selling, but demand continued behind normal; heavyweights sluggish.

Silk Textile Markets—Raw silk very weak; prices dropped 10 to 15c.; overproduction and poor demand blamed. Thrown yarn also weak, with prices 10 to 15c. off. Steady, mild call for spun yarn; woolen and worsted trades buying cautiously. Broadsilks were firm, with strong call for rayons; certain rayon crepes short.

New England Mill Shares Steady

Five Out of Eight Current Mill Statements Show Profits in 1929

GENERALIZATIONS on the textile industry ending in the statement that it is in poor shape are in the main inaccurate. The industry covering cotton, wool, silk and rayon is too vast and complex to be comprehended under a single formula. In some sections the industry is in poor shape, in others in good shape, in still others at the very peak of successful achievement. Within the same branch of manufacturing some mills show steady and satisfactory earnings, while in others readjustment to new conditions converted a big 1928 loss into a respectable 1929 profit.

In the appraisal of values as represented by movement in textile shares, some mill shares move up and others move down, but the average is remarkably stable. Three months ago 50 active New England mill stocks had an average value of $61.20; at this time the average value is $61.50.

A general analysis of the statements which follow reveal several prominent features of the situation as related to satisfactory operations resulting in the production of dividends: (1) expansion in sales; (2) reduction of capitalization; (3) surprising comeback from loss in 1928 to profit in 1929; (4) steady earnings during a year of declining markets; (5) issuance of additional stock to provide further working capital; (6) management economies covering among other things sales of unprofitable and acquisition of desirable properties; (7) sales of obsolescent and purchases of modern machinery; (8) complete liquidation of positively unfit organizations.

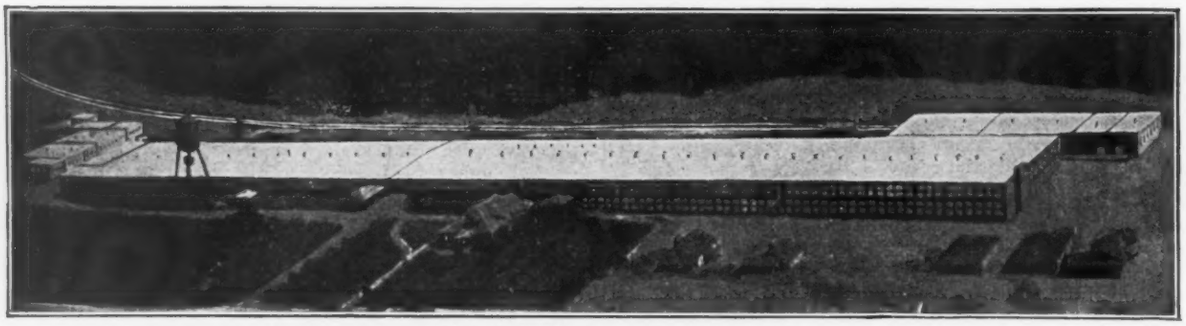
Ludlow Sales Expand—The Ludlow Mfg. Associates, Ludlow, Boston, and Andover, Mass., and Paterson, N. J., report for the year ended Dec. 31, 1929, net profit, after payment of taxes on 1928 business of $2,583,215, equal to $13.85 a share on the 186,400 shares outstanding, as compared with $16.20 a share on 150,612 shares in 1928. Sales in 1929 were the largest in the company's history, totaling $22,634,456 as against $19,240,692 in 1928. The Andover plant of the company has been shut down and operations transferred to Ludlow and Paterson.

Blumenthal Earns $9.71 on Common—Sidney Blumenthal & Co., Inc., operating plants at Shelton, Bridgeport, and Uncasville, Conn., and South River, N. J., reports net income for the full 1929 year of $2,497,194, equal to $9.71 a share on the 239,012 common shares, against $2,548,843 or $9.96 a share on the common stock in 1928. As of Dec. 31, 1929, cash on hand was $2,699,878, and further additions to cash since that time have increased the amount to approximately $3,400,000. On Dec. 31, 1928, cash on hand was only $1,513,469, so that during 1929 the company was able to add nearly $1,200,000 to cash, while paying out $650,000 in back dividends in addition to the regular preferred dividends. The company also expended close to $1,000,000 in acquisition of the Saltex Looms, Inc., and, in addition, made a substantial investment in the Rollinson Mills at Rocky Mount, N. C. At the close of the year, current assets totaled $8,398,291, against current liabilities of only $881,125, leaving working capital of $7,517,166. On Dec. 31, 1928, current assets were $8,239,821, against current liabilities of $1,632,298. Ratio of current assets to current liabilities on Dec. 31, 1929, was around 10 to 1, against only slightly better than 5 to 1 a year previous.

Neild Mfg. Shows Comeback—The Neild Mfg. Co., New Bedford, Mass., for the year ended Dec. 31, 1929, showed earnings of about $68,000, as compared with a loss of about $62,000 before depreciation for the 1928 fiscal year. Questioned as to reports that the company's directors had received an offer from Jerome A. Newman, New York, for including the Neild in his 1,000,000-spindle, fine-goods merger, Mr. Neild, president, stated that they have been talking over proposals from Mr. Newman for a year now but have not as yet received a concrete proposition they could consider. The balance sheet for the past year showed quick assets of $811,098 against current liabilities of $104,671, leaving a net working capital of $706,427, or approximately $59 a share.

Dartmouth Reduces Capitalization—The Dartmouth Mfg. Co., New Bedford, Mass., reports a manufacturing gain before depreciation for the fiscal year ended Dec. 28, 1929, of $314,000. Profit and loss account increased $227,679, and $246,000 was paid out in dividends during the year. Earnings for 1928 before depreciation amounted to $346,102. The balance sheet as of Dec. 28, 1929, shows quick assets of $1,332,764 with no quick liabilities, and compares with net quick assets of $2,746,834 on Dec. 31, 1928, or a decrease of $1,414,070. The shrinkage in net quick is accounted for by the fact that during the year the company reduced its capitalization from $3,600,000 on the common to $2,400,000, and from $600,000 to $200,000 on the preferred, paying $90 a share for the common and $87 for the preferred, or a total of $1,428,000. The company is now capitalized at about $15.29 a spindle, as compared with $24.70 a spindle before reduction of capital stock.

Newmarket Mfg. Readjustment—Newmarket Mfg. Co., Newmarket, N. H., reports for the fiscal year ended Dec. 31, 1929, net loss after all charges



Spinning Mill, Lincolnton, N. C.

Announcement!

WE are dyeing and furnishing resist colored mercerized yarns in all numbers for the full fashioned and seamless hosiery trade. We will gladly submit samples and lowest prices, and can make prompt deliveries on all counts.

BOGER & CRAWFORD

"From the Cotton Field Direct to You"

J. and E. Venango Sts.
PHILADELPHIA, PA.

including depreciation of $90,923; this compares with net income after similar charges in 1928 of $245,214, equivalent to $7.77 a share on $32,400 shares. In 1929 depreciation totaled $72,000. Negotations are now in progress for disposing of the cotton machinery at Newmarket. Cost of repairs and changes in the new building acquired at Lowell, Mass., new equipment for machinery moved from Newmarket to Lowell and additional machinery called for by the move amounted to $125,308 and was charged to capital account; all other expenses incident to the move were paid for out of current operations. One dividend of $1.50 was paid Feb. 15, 1929. Dividends usually paid during the other quarters of the year were omitted.

Boston Stock Auctions—The following sales of textile shares were made at Wednesday's auction:

Shares	Mill	Par	Price	Change
105	Associated Textile	...	35-36¼	.....
47	Sagamore	100	82½-83	— 1¼
40	Lancaster, com	100	26c.	—14c
50	Arlington	100	26½	+ 1½
38	Berkshire, com.*	...	33½	— 1½
20	Exeter	100	52	— 8
10	Quissett, com	100	51½	+ ½
45	King Philip	100	105½	+ ½
10	Lancaster, pfd	100	9	+ 1
64	Pepperell	100	102	— ½
5	Naumkeag	100	90	.....
15	Nashua, pfd	100	80	.....
449	Total			

*Ex. div.

Textiles on N. Y. Exchanges—The following shows the movements of the leading textile stocks listed on the New York Stock Exchange and Curb for the week ended Feb. 26:

	High	Low	Last Sale	Net Change
American Woolen	19½	17	18½	+ ½
American Woolen, pfd	42½	40	42	+ 1½
Belding-Hemingway	5½	5½	5½	+ ½
*Blumenthal	44½	43	44	+ 1½
Botany Mills, A	4	3½	4	+ ½
Cannon Mills	32	31	31½	— ½
Collins & Aikman	31½	29	30½	— 1½
Consolidated Textile	1¼	1½	1½	— ¼
*Courtaulds, Ltd	11½	11½	11½	— 1
Duplan Silk	18½	17	18½	+ 2½
Durham Hosiery, pfd	57½	55	56	+ 3
Gotham Hosiery	25½	24¾	25	— ¾
Kayser, Julius	38¾	37	37¾	— ¾
Kendall, pfd	84½	84½	84½	+ ½
Mallinson	8½	8	8	— ½
Mohawk Carpet	34½	31½	31½	— 2½
Munsingwear	51	51	51	— 2½
Pacific Mills	29¾	29½	29½	— ½
*Powdrell & Alexander	55½	55½	55½	— 3¾
Real Silk Hosiery	58¾	55½	58½	+ 1
*Tubize	134	130	131	— 4
United Piece Dye Wks.	26¾	26¾	26¾	— 1¼

*Listed on Curb.

Nonquitt Reduces Capital Stock $240,000—Nonquitt Mills, New Bedford, Mass., reports net loss of $105,374 for the year ended December 31, 1929, and operating loss of $84,520. Stockholders voted to reduce capital stock by $240,000 to be paid to stockholders on the basis of $5 per share, payable about April 1 to stock of record Feb. 15. President Hendricks H. Whitman stated: "If we pay $5 per share it will leave us with just under $12 per spindle of quick assets, and directors believe this to be ample for a mill of this character." During the last quarter of 1929 the company installed 250 Draper automatic looms for the production of fine goods, and practically all of these looms are now in operation. The company sold the balance of its stock in the Belleville Storage Warehouse for $29,784. It had been carried on the books at over $100,000.

Courtaulds' Statement—The profits for 1929, after charging expenses, depreciation and taxation, amount to £3,743,827 11s. 6d., of which £1,651,856 9s. 11d. has been allocated to writing down the company's Continental industrial investments, leaving a balance of £2,091,971 1s. 7d.

To this is added the balance of £1,394,716 4s. 7d. brought forward from 1928, and the directors recommend the payment of a final dividend for the year ended Dec. 31, 1929, on the ordinary share capital of 6%, free of British income-tax, making a total dividend for the year of 10%, free of British income-tax, absorbing, with the preference dividend of £400,000, a total of £2,800,000, and leaving a balance of £686,687 6s. 2d. to carry forward.

The statement says "The reduction in the trading profit is accounted for by the unsatisfactory state of business in this country."

The cut in the dividend was not unexpected, but the profits were lower than was generally anticipated. The shares slumped to 45 shillings.

Not Much Change in South—The average in bid price of 25 common stocks of southern cotton mills closed for the week ending Feb. 22 at 84.80 or a net decline of 12c. a share from the previous week's close. The weekly summary as compiled by R. S. Dickson & Co. of Charlotte, N. C., states that a better demand was noted for a number of issues such as China Grove, Anderson Cotton Mills, National Yarn Mills, Stowe Spinning, Perfection and a few others, although the bids were practically unchanged with few exceptions.

Cotton Yarns Dull and Lower

Raw Material Decline Worries Cotton Yarn Spinners

PHILADELPHIA.

YARNS are at a standstill, the market being duller than it has been for months. Manufacturers have become disconcerted by the violent decline in the cotton market, and are not buying where they can possibly avoid it. There is little hope for a change for the better in this situation until a degree of stability appears in the cotton situation, as lower prices would only tend to frighten buyers more than ever.

Although the situation is bad, it could be a lot worse from the spinners' standpoint, since, as many agree, carded-yarn spinners are curtailing their production, and doing more to keep it within fair limits than in any previous dull period. While there are spinners who are willing to sell at ridiculous prices, a great majority are holding to their policy of not selling at current prices more than a small proportion of their production during the next month.

In other words, a majority of spinners are keeping their heads at the present time, which admittedly is a difficult one for spinners. They have been more constrained than selling-houses, and reports are current that several concerns during recent weeks have been forcing prices down more rapidly than the raw material market declined, through short selling, commission-cutting, etc.

Demand Disappears—There is no demand for yarns, and sellers who are forcing the issue are selling at prices that, based upon current costs of cotton, will mean a loss of several cents a pound, and at the same time are not making sales large enough to make these concessions worth-while from any standpoint. The impression among the leading houses is that selling of cotton has reached a stage that was reached in the stock market last fall, and that, as in that instance, the down trend will carry much too far. Trade opinion is that cotton is worth more than it is being quoted at on the futures market. Spinners buying inch staple and longer discover that fact quickly in the South.

Admitting that conditions at the minute are unfavorable, and that the immediate outlook is not good, things are not so bad as many are trying to paint them. One of the largest houses reports that their business in January was better than in the same month of 1929 and that February will be almost up to the January level. This concern sold fairly actively during the first two weeks of February. Several other representative concerns here did a fair to good volume of knitting-yarn business during the first two months of this year, but all agree that the last ten days have been exceptionally quiet.

Underwear Yarns Lower—Underwear manufacturers took large quantities of yarn during recent weeks for their light-weight lines, and spinners of extra-carded sold 30s freely at 37 to 38c. This count is being quoted this week at 35½c., and certain mills assert that they could buy at 35c., which is at least two cents under the price at which many large contracts were placed.

ACELE BULLETIN NO. 4

Evenness . . .

Coverage . . .

Softness

The evenness of ACELE deniers means more than exact yardage. It prevents rings in hose and barre in fabric.

ACELE will give you maximum volume for length and weight.

ACELE has distinctive softness—an all-important characteristic of this better acetate yarn. For a soft yarn is a covering yarn. Softness is responsible for hand and effective drape.

Deliveries of ACELE are now being made in 75, 100, and 150 deniers. We urge every mill, converter and factor in the industry to communicate with us. We can give you the kind of cooperation you need.

ACELE Division, Du Pont Rayon Co.
2 Park Avenue · New York City · LEXington 0022

BULLETINS OF OUR PROGRESS WILL BE PUBLISHED HERE REGULARLY

Manufacturers, seeing this amount of money get away from them, are staying out of the market until they are sure that the worst has been seen. This applies to weavers as well as knitters, even though most of the latter are covered further ahead than weavers.

Knitting yarns have been offered freely at 26c. basis 10s, and the only sales reported were on a level one cent under this for ordinary quality yarn. Weaving counts have been reduced from one-half to one full cent as compared with last week, and there are rumors of sales at even lower levels. It is stated by manufacturers that they are able to buy such speculative counts as 20s-2 and 30s-2 at a full cent under figures being named by spinners.

The latter are quoting 20s-2 warps ordinary grade at 31 to 31½c., and sales have been made at 30½c.; 30s-2 warps of the same cotton are quoted at 36 to 37c., with sales reported at 35½c.; sales at lower levels were not confirmable at reputable selling houses up to middle of the week. Plush quality warps are quoted a cent above ordinary quality, and demand, which had started to improve, has disappeared.

●

CHARLOTTE, N. C.—There appeared to be a slackening of activity in the Charlotte-Gastonia yarn center during the week, which dealers largely attributed to weakness in the raw cotton market, and carded and combed prices were slightly less firm than during the previous week.

Reports indicated that combed yarns for weaving were fairly active, but yarns for the hosiery trade were extremely dull. Reliable information was to the effect that the majority of combed spinning mills, beginning this week, will be operated at only about 75% normal capacity in order to avoid the serious consequences of overproduction.

Dealers report that many inquiries have been received but that buyers prefer to postpone commitments until the raw material market has acquired a steadier tone.

Carded yarn quotations showed no marked change over the previous week. Hosiery yarn on cones were sold on the basis of 26½c. for 10s single, while 20s-2 were priced at 31 to 31½c. and 30s-2 at 35½ to 36c.

●

BOSTON.—The tendency toward a firmer yarn market seen last week, with prices considered attractive and spinners exhibiting resistance to low offerings, has disappeared following a disappointing drop in cotton to a new low level. Buyers who were on the point of placing orders last week are now congratulating themselves on having awaited developments. The yarn market at time of writing is weak and unsettled; a general drying up of inquiries has taken place, and actual consumer buying has been reduced to a minimum. All counts can be bought at lower prices, and yet, such is the uncertainty, they are not being purchased, on the possibility of lower values on cotton. The coarse counts have been easy in price for a long time; below 20s everything is in the buyer's favor, and there is not much difference above 20s; the price of 30c. for 2-20s warp is barely firm.

Apart from the cotton situation, consumers of standard white counts are not experiencing the inflow of business expected as a result of government attempts to sustain industrial activity. In yarns for general industrial purposes, business is relatively larger than for the weaving and knitting industries. Some large knitters, however, are said to be on the point of placing good business, and carpet-yarn users may buy at any time. Interest in fine yarns is not large, although the mills who manufacture for their own consumption are relatively busy. Some business is also arriving in specialty yarns and colored yarns for the outwear knitting trade.

Stocks in consumers' hands are believed to be low; there is no actual assurance of this, yet it is apparently confirmed by the demand for quick delivery on purchases. The big increase in spindle activity for January can hardly be considered favorable to stabilization of yarn prices in a thin buying market, altogether apart from price fluctuations in the staple.

●

NEW YORK—The raw cotton market has caused the yarn market to reach a state best described as the doldrums. Buyers view cotton prices and either put off purchasing or make very low offers. Most of the business being booked is on the basis of these low offers. Spinners are holding fairly firm in the main, but the volume of business is such that buyers are able to pick up enough distress lots to satisfy their needs. The latter situation hints at the possibility of too much yarn being made for stock recently.

If the present dullness continues for long it is hoped that spinners will curtail in proportion and not further complicate the market by dumping excess stocks. There is no factor in business today which would justify a mill in running up stock. Even if reasonable improvement is looked for all the benefits would be lost through overproduction.

Less Interest in Yarns—Purchasers are less interested in yarns at the present levels than they were at the higher prices. They admit that yarns look cheap, but say they looked cheap a month ago and then proceeded to get cheaper and that anything is liable to happen. The argument that at least one thing is sure and that is prices offer better bargains than a month ago fails to move them for the moment. Outside of the cotton factor there has not been much change in fundamental conditions and prospects, but there is a lack of confidence and as little buying as possible is being done.

Looking at the brighter side of the market it has been said that the present extreme dullness is mainly a matter of psychology and that the volume of business should return to the levels of January and the first half of February. Some feel that this would not be much to cheer about, but admit it would be better than present conditions.

Between Season in Worsted Yarns

Waiting For Showing Of Men's Wear Fancies

PHILADELPHIA.

ALTHOUGH there is a fair demand for yarns from the outerwear trades, chief interest at present is in the opening of men's wear fancies which will take place within the next few days. Men's wear manufacturers in this section report that they plan to show new fabrics the first week in March. Not until this is done—and possibly not even then—will there be any sustained demand from weavers for yarns.

The outlook for immediate interest from men's wear mills in mixtures for their heavy-weight season is not bright, although a spinner here and there who is willing to name a low figure, or one that has the best reputation for certain qualities may book a substantial business. Manufacturing, along with other lines of industry, suffered loss in business after the stock market crumbled last fall, and the light-weight season in men's wear has never fully recovered from that disaster.

Manufacturers ended the season without orders on their books, largely because duplicating had been completed long before the season ended. This has meant that they did not use all the yarn they had on order for their light-weights, and many of them will specify on these for their new lines before they will be in position to place new mixture yarn contracts. Mills have been working on sample orders and taking yarn on old contracts at a fair rate during the last week, and spinners report that the unfilled balances would be soon cleared up should goods buyers operate on the heavy-weight lines during next few weeks.

Mixture Demand Quiet—The fact that several leading French spinners reduced prices of mixtures from the quotation of $1.85 for 2-30s, 64s of two weeks ago to $1.80 has not caused any expansion in demand from manufacturers, and it is thought that conservatism will

NATIONAL

"Flying South" . . . crepe de chine . . . Marine and Lupine-blue blue birds on a blossom pink ground.

"Catalina" . . . pajamas beach coats or even yacht club curtains . . . fine horizontally ribbed rayon faille of aquagreen, printed in Emerald and Tarragon green and peacock blue.

"Crossed Wires" . . . a safe Spring prognostication . . . being simply Chartreuse georgette printed with varying black lines.

It is the finishing touch of style . . . the final note of elegance or chic that is demanded in fine fabrics of today. The *best is most profitable* in this last step of manufacture.

The Scope of National Service

Piece Dyeing—Weighting—Finishing—Moire—Hosiery—Roller and Screen Printing—Rayon and Celanese—Ribbons—Skein Silk—Knitted Fabrics—Mixed Goods

NATIONAL SILK DYEING COMPANY

5 Colt Street, Paterson, N. J. *New York Salesrooms:* 152 Madison Avenue. *Works:* Paterson, N. J., East Paterson, N. J., Allentown, Pa., Williamsport, Pa. *Canadian Branch:* Dominion Silk Dyeing and Finishing Company, Limited, Drummondville, P. Q., Canada.

Reg. Trade Mark

NSDC

cause them to wait until initial goods orders are booked before they place new yarn mixture contracts.

Sales to outerwear mills are proceeding at a fair rate, and larger transactions are being completed with manufacturers of bathing-suits. This trade is purchasing fair-sized quantities of single counts dyed, but shows little interest in two-ply. English spun 15s, 48s, are selling at $1.32½ dyed, with lower-grade yarns offered for proportionately less.

Two-ply English-spun outerwear counts are quoted by leading spinners on the basis of $1.22½ for 2-20s, 50s, without change in price during the week. As knitters are using larger amounts of 64s grade yarns, prices of these are relatively firmer than quarter-blood stock, and there are reports that it is possible for manufacturers to better the $1.22½ figure when they are interested. The largest spinners, however, hold at this price, which is equivalent to a dyed charge of $1.40 for 2-20s, 50s, and refuse to accept less.

Zephyr Yarns Less Active—There has been a smaller interest in 2-40s, 64s, zephyr yarns from knitters, and French-system spinners believe that the bulk of spring goods has been covered with yarns. Spinners are quoting this count at $1.75, but there are smaller factors willing to sell for slightly less, and several of these report a continued fair demand. The edge of buying of this count, at least for the present, has been taken off, and any possible new spurt depends upon manufacturers receiving duplicate goods orders.

Sweater demand is quiet at present so far as large yarn contracts are concerned, although manufacturers of women's ensembles have taken medium sized quantities this week, chiefly in 2-20s, 2-26s, 2-30s and 2-40s, and grades ranging from quarter blood up to 64s. Two-ply spinners are operating at same rates, which are better than in January, but several are making some stock at present.

◆Thrown Silk Prices Drop 10-15c.

THROWN silk yarn movement showed no signs of improvement, and prices registered a further drop, averaging 10 to 15c. less than last week. Throwsters were frankly discouraged, when discussing the outlook this week, and few would make any predictions regarding the prospects.

Buying was light and spotty, and orders were obtained only after persistent solicitation. The one bright spot in the situation was the small supply of yarn on hand; throwsters are producing cautiously, and this policy has served as a brake on the downward trend of prices.

Surprisingly enough, there is little bickering in the market; the reductions announced by throwsters seem to meet the ideas of manufacturers, at least to some extent; then, too, the throwsters themselves hold firm to prices, preferring not to sell rather than make further reductions.

◆Spun Silk Demand Mild But Steady

DEMAND for spun silk yarns was steady but mild. The spirited pressure of recent weeks eased off somewhat, and there was a tendency toward nearby commitments. A fair quantity of April orders was placed during the week, but the bulk of buying was for immediate shipment, and these latter orders were usually small.

Both broadsilk weavers and woolen and worsted manufacturers were in the market for limited quantities of yarn. The demand from the woolen and worsted trade was lighter than had been expected, but spinners look for a livelier call next week. Reports from the heavyweight fabric weavers regarding movement of the new woolens and worsteds were favorable; the 1930 offerings were well received, and these manufacturers were expected to increase output shortly, which would necessitate additional spun yarn.

The outlook is good at the broadsilk end; shantungs and tub silks both are moving well. The announcement by the Spun Silk Research Committee of plans for its 1930 promotional drive among distributors and consumers to increase interest in spun silk fabrics, has stimulated confidence among the weavers. The slight let-up in yarn buying noted this week was regarded merely as a passing condition and a new spurt of buying by broadgoods mills was looked for soon.

Rayon Yarn Demand Spotty

Underwear Mills Buying; Market Generally Quiet

RAYON yarn was steady, with a fluctuating demand from certain of the knitwear markets. Producers of tricot underwear bought actively of the finer sizes, such as 50s and 75s; the orders were of fair size and all for spot shipment. Yarn producers noted an aversion to future commitments among their customers; the manufacturers were disinclined to buy even four weeks in advance.

Generally, the yarn market was quiet; sales for the first two months barely equalled those of the same period last year, it was believed. The explanation seemed to be that the consuming industries were still a little doubtful of the prospects for finished goods. Hosiery knitters placed little business during the week. Broadsilk weavers bought spottily, with no great demand from any end.

Expect Good March—Yarn producers were optimistic regarding March, and looked for an upcurve in buying. The cautious buying by mills during the past two months has left them with very small quantities of yarn on hand, and it is felt that they will be obliged to stock up soon.

Broadgoods Situation Paradoxical—The broadgoods market presents a paradox, in that the rayon content fabrics are selling spiritedly, but the weavers are buying little yarn. Some of these mills made inquiries during the week, indicating a disposition toward placing contracts soon.

Output of "Seconds" Declining—The output of second quality yarns is declining, a development which was hailed favorably in the market. The larger producers have been steadily reducing their output of seconds, due to improved methods of manufacture, but for a time this was offset by the quantity of seconds that the newer companies produced. Now, however, much of the latter has been consumed, and there are indications that the newer firms also will have less inferior yarn to sell. The widespread use of "seconds" resulted in the marketing of inferior rayon fabrics which brought dissatisfaction to customers and hurt the prestige of rayon, producers claim.

◆Best Cotton Wastes Are Firmly Priced

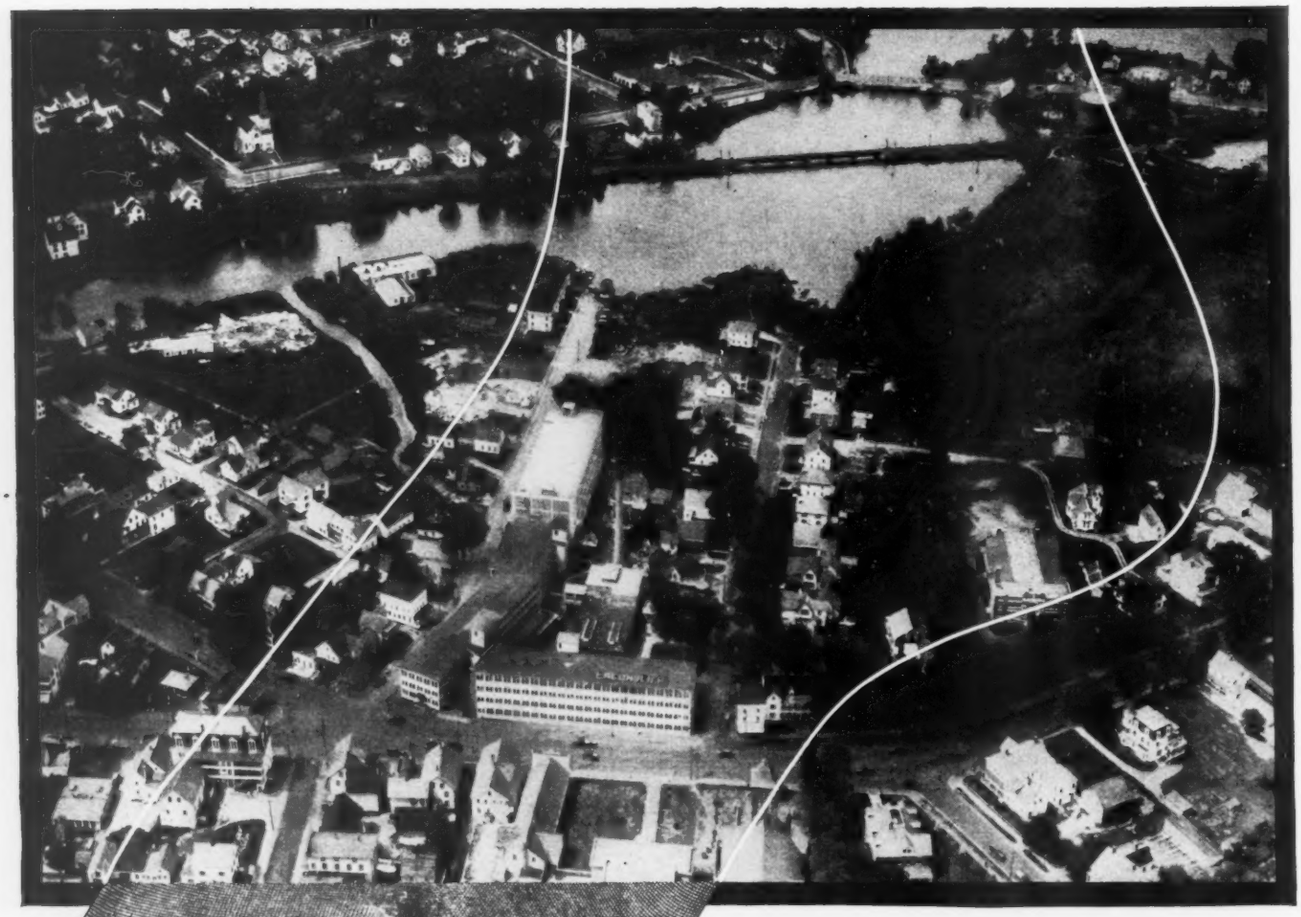
BOSTON.

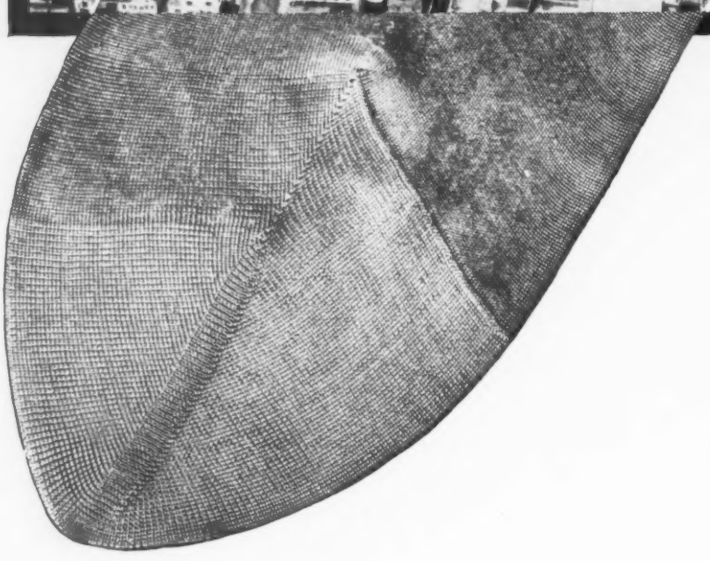
ANOTHER unsettled week in cotton brought further embarrassment to handlers of its wastes and by-products. The consumer seems much alive to the situation in cotton, perhaps more so, on the whole, than the average dealer. In any event, the fall in cotton below 16c. has necessarily forced a lower selling level on all sorts and conditions of waste. Comber brought 14c., selling on a higher percentage basis as cotton fell, which is the usual normal proceeding. Other wastes had to take care of themselves, and prices paid were contingent upon the negotiations carried on between the seller and buyer. There seems to be enough waste to meet all requirements, and probably a little more than is required for the thin consuming demand.

The lower price level on wastes during the last two weeks has affected the average trader to a smaller degree than the large houses which have con-

HOME OF THE MODEL K

at Laconia, New Hampshire





The New
"GUSSET TOE"

THE new 340 Needle K stocking with Gusset Toe is the vogue among smartly dressed women.

Established 1865

SCOTT & WILLIAMS

Incorporated

366 BROADWAY, NEW YORK, N. Y.

tracted for the output of a number of mills. The commission seller has been doing a fair business, it is said. The general price situation is considered sound, although the uncertain cotton situation is rather detrimental. Weakness in cotton has had its effect on thread wastes for machining, but has not been reflected in prices paid on the machined material.

Attention is drawn to the fact that a large proportion of untenderable cotton in last year's crop is now beginning to show itself in higher prices and larger premiums for the staple grades. Under normal crop conditions the difference between middling and strict middling is usually not more than 1c., but at the present time it is running about 2c. This situation in cotton ought to enable sellers of choice spinning materials to ask at least for firm prices.

Imports of cotton wastes into the United States for 1929 showed a decrease of approximately 6,000,000 lb., and the decline is still proceeding, although New York continues to bring in substantial quantities from month to month. The cotton-waste trade is managing to maintain a fair optimism over the situation, but, having experienced a very unsatisfactory year in 1929, is inclined to look closely at overhead and to cut out all unnecessary expenses.

◆Wool Noils Reach Firm Trading Basis

BOSTON.

THE noil market has not moved out of its rut, but dealers, maintaining a good measure of confidence, are united in the belief that prices are on the bottom all along the line, and that, before many weeks have passed, merino noils, which have been unduly depressed, are likely to take a sharp upward turn. Woolen mills are showing increased interest in scoured and pulled wools, and this may be the forerunner of better business for the noil market. Consumers have apparently recognized the fact that it is idle for them to attempt to get lower values on most of the noils offered. Prices have been unchanged in the main for the entire month, and as the local wool market is more stable than it has been, it is not improbable that the noil market has at last reached a steady trading basis.

The low values put upon the merino qualities have probably discounted the worst that is likely to happen to wool in the near future. Dealers do not seem over anxious to press sales on the thin consuming market. A good noil is said to be good property always. Stocks of domestic merino noils are quite substantial, and yet in the case of fine noils, the by-product of the combing of Cape merinos, the supply is short and has been for months.

In the Bradford market some clean, bright, merino noils have been selling in larger quantity to Boston, and it is noted there that the Boston basis has developed considerable firmness. Noil prices in Bradford, however, are tending downward, and it is realized that they will have to sell cheaper to be on a par with the price of wool. Late advices from Bradford state that the trade there is generally suffering from the absence of American support.

◆Wool Rag Position Continues Uncertain

BOSTON.

RECOVERED-WOOL manufacturers are expecting some increase in mill business during the next few weeks, since it is usual for the market to take on additional activity during the closing weeks of February. The low price to which wool has fallen, however, is having a certain amount of sentimental influence on mill buyers of reworks and old materials. While it cannot be said that wool has fallen so low as to force reworks, rags and clips out of the running, it has, nevertheless, reached a low level that may force further readjustment in the general price level of the reworked wool and rag market.

It is a buyer's market in the mixed rags, but the sorters are not very energetic, having so restricted an outlet for the graded materials. Some mills which use rags and reworks are operating largely on lightweight goods, on rush orders for the Easter season. Later there will be a switch in manufacturing to heavyweights for next fall, and a larger consumption of recovered materials, rags, and clips is likely to occur.

The drop in wool prices the world over has had at least one important effect on the artificial-wool business which several months ago, particularly in France, was making rapid headway. Low wool prices are said to have brought about a semi-collapse of artificial-wool manufacturing on the Continent.

There seems to be good speculative interest in choice foreign rags, and while the date at which the tariff will be enacted is constantly being moved forward, owing to extraordinary dissension in the Senate, it is generally believed that when the tariff does pass it will contain a higher duty on rags than is now in force. In the Dewsbury market the best white knits, coarse Shetlands, silver blues, and similar materials are moving slowly, and it is believed that these grades will have to be revised on a lower basis in order to interest consumers.

Imports of wool rags and clips into the United States for 1929 showed a net decrease of 2,517,000 lb., the full import for the year amounting to 20,485,000 lb. as compared with 23,002,000 lb. for the year 1928. December imports, which were much below the average monthly arrival during 1929, amounted to 621,000 lb. only, of which amount 365,000 lb. came from England and 136,000 lb. from Canada, the second largest exporter.

◆Rayon Waste Continues Weak

THE lull which has prevailed in rayon waste for several weeks showed no signs of abating, though dealers were hopeful that business would pick up about the middle of March. Buying this week was restricted to small orders, all for spot shipment. Dealers found it difficult to move current stocks, and considerable bargain yarn was available. Prices were generally weak, though no decisive decline was registered.

As one dealer put it, the converters and manufacturers seemed to be "playing a waiting game." The woolen and worsted trade which it was hoped would begin buying waste this week, showed little interest. The same factor added: "Two weeks ought to bring a turning-point; we look for no quick jump, but we expect to see signs of an improvement about the middle of the month."

Cotton Supported Under 15c.

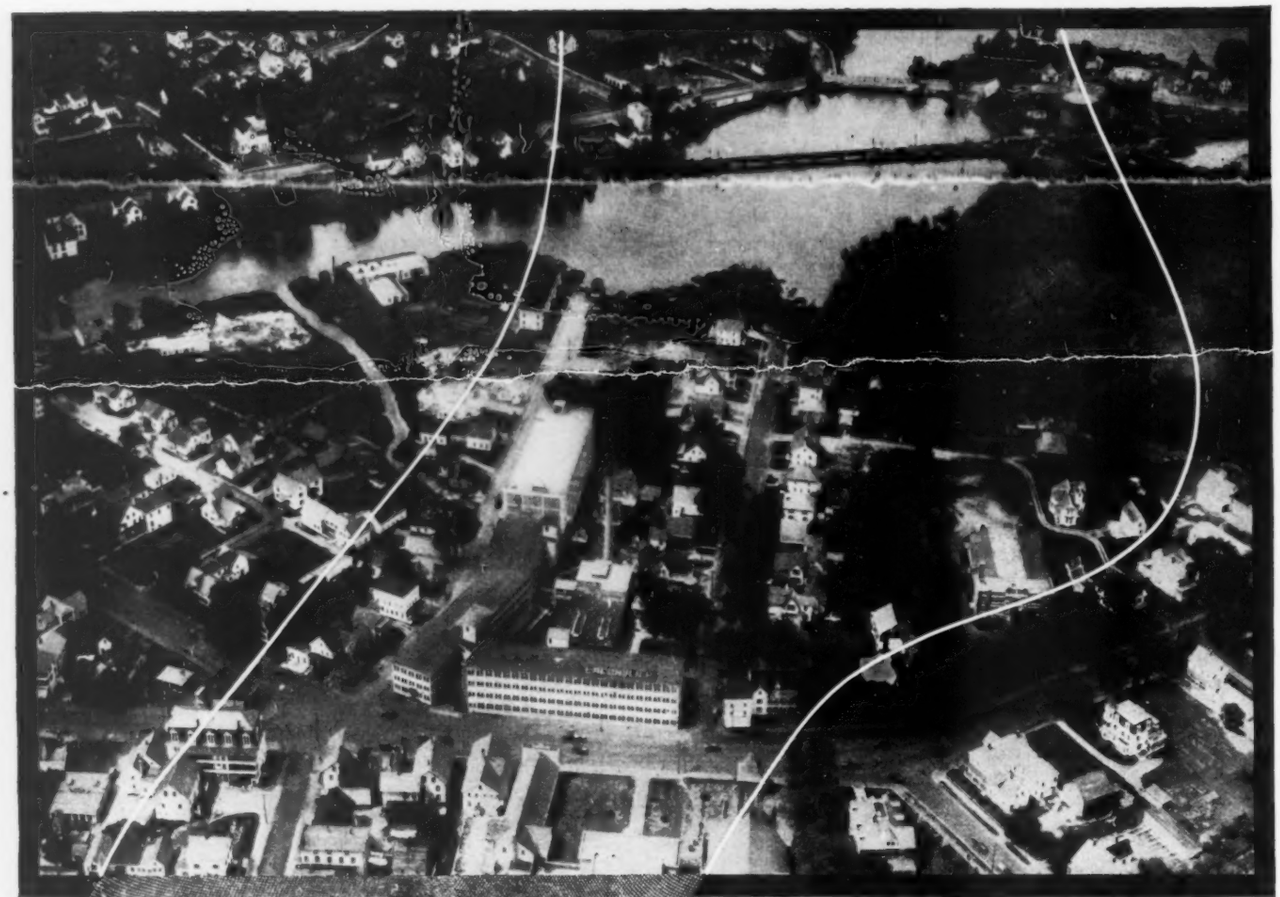
Market Unsettled by Action of Wheat And Uncertainty as to Acreages

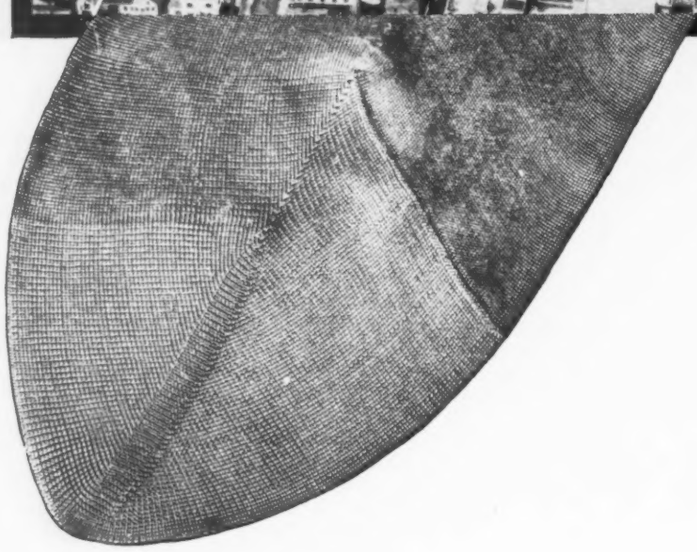
THE weakness of wheat, continued liquidation of March contracts in preparation for Tuesday's notices, and the apparent absence of any aggressive support, were reflected by sharp declines in the cotton market right after the holiday. May contracts which had shown a tendency to fluctuate between the 15½ and 16c. level during the previous week broke through 15c., selling off to 14.95 on Tuesday or 123 points below the high price of Feb. 14 and into new low ground for the season. Many stop orders were uncovered on the decline, but an active trade demand developed just below the 15c. level, which absorbed the offerings and led to moderate recoveries, at which the volume of business tapered off, with the market later showing hesitation.

Sensitive to Wheat—Cotton seems to have been quite unusually sensitive to the course of the wheat market again during the week. A report that brokers presumably operating for the cooperative interest were heavy buyers on the decline of Tuesday, leading to sharp ral-

HOME OF THE MODEL K

at Laconia, New Hampshire





The New
"GUSSET TOE"

THE new 340 Needle K stocking with Gusset Toe is the vogue among smartly dressed women.

Established 1865

SCOTT & WILLIAMS

Incorporated

366 BROADWAY, NEW YORK, N. Y.

tracted for the output of a number of mills. The commission seller has been doing a fair business, it is said. The general price situation is considered sound, although the uncertain cotton situation is rather detrimental. Weakness in cotton has had its effect on thread wastes for machining, but has not been reflected in prices paid on the machined material.

Attention is drawn to the fact that a large proportion of untenderable cotton in last year's crop is now beginning to show itself in higher prices and larger premiums for the staple grades. Under normal crop conditions the difference between middling and strict middling is usually not more than 1c., but at the present time it is running about 2c. This situation in cotton ought to enable sellers of choice spinning materials to ask at least for firm prices.

Imports of cotton wastes into the United States for 1929 showed a decrease of approximately 6,000,000 lb., and the decline is still proceeding, although New York continues to bring in substantial quantities from month to month. The cotton-waste trade is managing to maintain a fair optimism over the situation, but, having experienced a very unsatisfactory year in 1929, is inclined to look closely at overhead and to cut out all unnecessary expenses.

◆Wool Noils Reach Firm Trading Basis

BOSTON.

THE noil market has not moved out of its rut, but dealers, maintaining a good measure of confidence, are united in the belief that prices are on the bottom all along the line, and that, before many weeks have passed, merino noils, which have been unduly depressed, are likely to take a sharp upward turn. Woolen mills are showing increased interest in scoured and pulled wools, and this may be the forerunner of better business for the noil market. Consumers have apparently recognized the fact that it is idle for them to attempt to get lower values on most of the noils offered. Prices have been unchanged in the main for the entire month, and as the local wool market is more stable than it has been, it is not improbable that the noil market has at last reached a steady trading basis.

The low values put upon the merino qualities have probably discounted the worst that is likely to happen to wool in the near future. Dealers do not seem over anxious to press sales on the thin consuming market. A good noil is said to be good property always. Stocks of domestic merino noils are quite substantial, and yet in the case of fine noils, the by-product of the combing of Cape merinos, the supply is short and has been for months.

In the Bradford market some clean, bright, merino noils have been selling in larger quantity to Boston, and it is noted there that the Boston basis has developed considerable firmness. Noil prices in Bradford, however, are tending downward, and it is realized that they will have to sell cheaper to be on a par with the price of wool. Late advices from Bradford state that the trade there is generally suffering from the absence of American support.

◆Wool Rag Position Continues Uncertain

BOSTON.

RECOVERED-WOOL manufacturers are expecting some increase in mill business during the next few weeks, since it is usual for the market to take on additional activity during the closing weeks of February. The low price to which wool has fallen, however, is having a certain amount of sentimental influence on mill buyers of reworks and old materials. While it cannot be said that wool has fallen so low as to force reworks, rags and clips out of the running, it has, nevertheless, reached a low level that may force further readjustment in the general price level of the reworked wool and rag market.

It is a buyer's market in the mixed rags, but the sorters are not very energetic, having so restricted an outlet for the graded materials. Some mills which use rags and reworks are operating largely on lightweight goods, on rush orders for the Easter season. Later there will be a switch in manufacturing to heavyweights for next fall, and a larger consumption of recovered materials, rags, and clips is likely to occur.

The drop in wool prices the world over has had at least one important effect on the artificial-wool business which several months ago, particularly in France, was making rapid headway. Low wool prices are said to have brought about a semi-collapse of artificial-wool manufacturing on the Continent.

There seems to be good speculative interest in choice foreign rags, and while the date at which the tariff will be enacted is constantly being moved forward, owing to extraordinary dissension in the Senate, it is generally believed that when the tariff does pass it will contain a higher duty on rags than is now in force. In the Dewsbury market the best white knits, coarse Shetlands, silver blues, and similar materials are moving slowly, and it is believed that these grades will have to be revised on a lower basis in order to interest consumers.

Imports of wool rags and clips into the United States for 1929 showed a net decrease of 2,517,000 lb., the full import for the year amounting to 20,485,000 lb. as compared with 23,002.000 lb. for the year 1928. December imports, which were much below the average monthly arrival during 1929, amounted to 621,000 lb. only, of which amount 365,000 lb. came from England and 136,000 lb. from Canada, the second largest exporter.

◆Rayon Waste Continues Weak

THE lull which has prevailed in rayon waste for several weeks showed no signs of abating, though dealers were hopeful that business would pick up about the middle of March. Buying this week was restricted to small orders, all for spot shipment. Dealers found it difficult to move current stocks, and considerable bargain yarn was available. Prices were generally weak, though no decisive decline was registered.

As one dealer put it, the converters and manufacturers seemed to be "playing a waiting game." The woolen and worsted trade which it was hoped would begin buying waste this week, showed little interest. The same factor added: "Two weeks ought to bring a turning-point; we look for no quick jump, but we expect to see signs of an improvement about the middle of the month."

Cotton Supported Under 15c.

Market Unsettled by Action of Wheat And Uncertainty as to Acreages

THE weakness of wheat, continued liquidation of March contracts in preparation for Tuesday's notices, and the apparent absence of any aggressive support, were reflected by sharp declines in the cotton market right after the holiday. May contracts which had shown a tendency to fluctuate between the 15½ and 16c. level during the previous week broke through 15c., selling off to 14.95 on Tuesday or 123 points below the high price of Feb. 14 and into new low ground for the season. Many stop orders were uncovered on the decline, but an active trade demand developed just below the 15c. level, which absorbed the offerings and led to moderate recoveries, at which the volume of business tapered off, with the market later showing hesitation.

Sensitive to Wheat—Cotton seems to have been quite unusually sensitive to the course of the wheat market again during the week. A report that brokers presumably operating for the cooperative interest were heavy buyers on the decline of Tuesday, leading to sharp ral-

As easy as rolling off a log..

Incorporated in the new Wildman Full-Fashioned Hosiery Machine are many features which are entirely the result of our years of study of this type of machine in practical operation. One feature for example is the slow-motion mechanism which is operated by the mere touching of a lever. No effort required. It's as easy as rolling off a log.

Write for further information.

WILDMAN MFG. CO.
FULL-FASHIONED DIVISION
NORRISTOWN, PA.

lies, came coincidently with the development of an active trade demand in the cotton market. Perhaps the indications that the break in wheat had attracted support from the cooperative marketing organization, was regarded as a forerunner of what might happen in cotton.

In any event, some of the local cotton men felt that the decline had gone far enough to exercise a restricting influence on the acreage and possibly to stir up stabilizing influences within the trade itself. At the same time it was quite clear that there was no general disposition to follow up advances, with buying orders. After selling up from 14.95 to 15.40 for May, the volume of business tapered off, and it looked as if the market was still nervous or uncertain, and was more inclined to await developments than to proceed aggressively for the time being.

Possible Decrease in Acreage—The outcome as to its ultimate distribution may depend to some extent on the shaping up of coming crop prospects. In the meantime it would seem reasonable to suppose that the lower prices go, the more likely there is to be a decrease in acreage, and the more stimulating will be the effect on consumption in the world's markets.

There has been no focusing of sentiment as to the acreage prospect. There are some in the trade who believe that there will be a very moderate reduction, if any, in the acreage. Others believe that with the acreage reduction campaign backed up by prevailing low prices, there will be a sharp cut in the area planted. Perhaps the truth is somewhere between the two, and whatever the present intentions of planters, they may be modified to some extent by weather conditions, or the further course of prices. Technically the position of the market must have been materially improved by the break of the last week. March liquidation seems to have pretty well run its course following the issuance of notices representing about 40,800 bales on Tuesday, and the market should soon find a point at which it may stabilize pending something definite with reference to coming acreage prospects.

●

BOSTON—The extra-staple cotton market has been further disturbed during the week by new low prices on spot and futures, which have disrupted the growing stabilization and scattered quite effectively all hopes that the tacit assistance of the Farm Board would be sufficient to sustain values. The premium basis is holding steady, however, and no reduction is looked for at the moment. In the case of choice and relatively scarce lengths some rise in premiums is not unlikely. Most of the commodity markets are weak, and the trend of 200 commodities continues downward.

Inquiries for extra staples were numerous during the week; demand was broader and the total turnover somewhat larger, but the latest flop in futures put on the brakes, and hesitation displaced confidence. Premiums in the New Bedford district were steady during the week, with buyers obtaining additional supplies for about a half cent per pound below the price for the previous week. Some offerings of cotton are said to have been forced out by credit pressure due to the fall in futures.

The New Bedford district seemed to be short of some of the lengths in demand, and mills were making firm offers for the types they needed, especially one inch, 1 1/16, and 1 1/8 in. staple. The spot supply of 1 1/16 in. was so limited that the cotton sold at a parity with 1 1/8 in. The extra staples were in slower call. The foreign cotton demand was slow, with Egyptians Uppers selling at 21-22c., and Sak. from 29 to 32c. for high grade. In this connection it may be noted that when the Senate reaches the free list, Senator Shortridge of California will introduce an amendment to make raw cotton dutiable.

During the week 6,751 bales arrived in Boston from Alexandria. Cotton consumption for the six months ending January 31 totaled 3,320,000 bales, of which amount New England utilized 624,000 bales or 18.8% of the total. Included in the above total consumption were 114,180 bales of Egyptian cotton, or 3.5% of the total consumption.

●

MEMPHIS, TENN., Feb. 24—The trade here seems to have about given up any lingering hope for a quick revival in the cotton market. Some expect the dull period to continue until something is definitely known as to the new crop acreage; others take the position that uncertainty as to the future supply is of small importance compared with developments affecting the productive consumer's outlet, about which they are disposed to feel optimistic.

Shippers, as a rule, are making unusual efforts to push sales, but are not trying to force the market by price-cuts. Basis remains practically stationary, both as first hands and that asked of mills. In both cases it is largely nominal because of restricted business; first hands have little cotton to offer, and mills appear indifferent, although besieged with samples. Shippers are combing the market for the so-called "bread and butter" cottons, but the supply is pretty well cornered by a few large firms; presumably, most current mill demand runs to these cottons.

Staples are very dull, with strict middling quoted as follows: 1 1/8 in. 300 on May, 1 1/16 in. 400 on, 1 1/4 in. 800 on; while unchanged in several weeks, basis is at the high for the season, and compares with last year at this time as follows: 1 1/8 in. 175 on, 1 1/16 in. 325 on and 1 1/4 in. 800 on. The staple association reports an unsold stock, or price not fixed, of 146,000 bales out of total receipts of 303,000 bales.

Arkansas compress stocks are considerably above what they were at this time last year. The total stock at Memphis, 395,000 bales, is still above the record for any date in a previous season, but is about 35,000 bales below the peak of the present season. The unsold stock in factor hands here, is 50,000 bales.

Net receipts picked up considerably during the week, and, for the first time in several, exceeded the corresponding week last year. The increase reflects improved weather conditions which enabled many growers to complete the old crop harvest.

Larger Wool Buying Noted

Merino Grades of Old Clip Moving Freely at Steady Prices

BOSTON.

THE Boston wool trade is throwing off its lethargy and entering the domestic wool field. Whatever contracting is done will be on a basis which, from almost any angle, seems to be favorable to contractors. Extreme weakness in the foreign wool market has depressed domestic values to such an extent that the contracting of wool this year seems a much safer proposition than it has proved during the last three years. The steady decline in wools during that period has left this commodity on a low, safe level, and, while there may be further slight disturbance, the most conservative opinion considers a slowly rising market for the year 1930 as most probable.

Another factor considered favorable, which may be taken into account is that domestic wool at this time is on a level well below the general commodity level of the United States.

Wool Is Firmer—Wool and its semi-manufactures, tops and yarns, after a steady decline during the last twelve months, are now firming up. Fine wools during the past twelve months have had a decline of approximately 28%, fine tops 22% and fine yarns, 2-50s, about 10%. After this radical deflation of values it would be foolish to expect any further decrease.

In anticipation of further additional business being placed in worsted fabrics topmakers and worsted manufacturers have been buying large quantities of fine and fine-medium territory wools and Texas 12-months wools. The market is as firm as at any time this year. Some increased interest is being shown in raw materials for carding.

The wool trade is setting out in

When service is imperative...

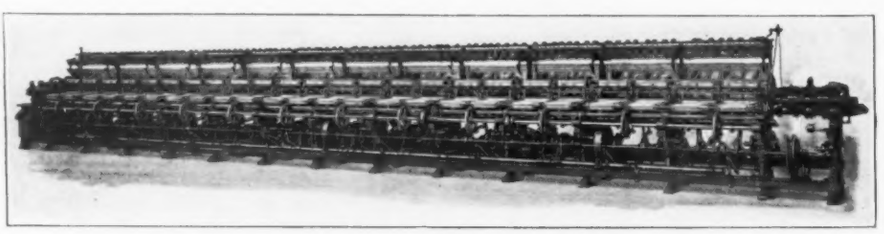
due to market changes

When Fashion says, "Make it this way," how soon can your mechanical equipment be ready to meet the changing demand? Are you off with the leaders or back with the tail-enders?

Since the first of this year we have received more than 500 orders for major attachments for the Reading Full-Fashioned Knitting Machine. To date, *more than 80% of these orders have been delivered and installed*

The secret of the ease and dispatch with which "Reading" machines can be equipped to meet market changes lies in their *standardization.* When our service men arrive at your mill with the attachments ordered they know what is to be done and how to do it. There is no "rebuilding," no special machine work necessary to adapt the attachment to your machines. Production is interrupted for only a few hours—not weeks or months—before your mill is turning out the advanced styles that bring top price.

TEXTILE MACHINE WORKS - - - - - *Reading, Pa.*



No one appreciates the standardized design of Reading Full-Fashioned Machines more than the mill-owner who has stood by with idle or obsolete machines while his competitors worked at capacity to meet the new demand.

good earnest to acquire its usual percentage of the domestic wool clip. The big wool pool is evidently not going to rule the roost, and, in Texas particularly, no little opposition has developed to the big marketing organization. So far as the growers are concerned they are apparently in clover, with the wool trade on the one hand and the national pool on the other ready to make all kinds of advances in order to secure the raw material.

Foreign Situation—The South American market is still very perplexing. It is estimated that about 75,000 bales have been sold in Montevideo, with 65,000 bales yet to be sold. During the week, approximately 2,000,000 lb. of South American wools arrived in Boston at low prices. This may have had something to do with the price easiness seen in domestic 1/4 bloods.

In the Australian and New Zealand markets the policy of the wool-growing councils and organizations to restrict their offerings very considerably so as to make the selling season extend over an additional two or three months is meeting with much opposition.

Raw Silk on Bargain Counter

New Price Drop Brings Much Unprofitable Business

RAW silk demand was spotty this week; some importers did a fair business, but generally at unsatisfactory prices. Broadsilk manufacturers limited their purchases to the most meager commitments for immediate needs, and the hosiery knitters were even less interested. The president of a medium-sized raw silk house said business was almost at a standstill, except at prices which allowed of no profit. Prices weakened all along the line, a general drop of 10c. being registered; in some sizes prices declined 15c.

Importers were not optimistic about the immediate future. A further weakness was looked for next week, though it was hoped that the market might reach a turning-point toward the end of March. The broadsilk mills have little raw silk on hand, and they are enjoying a fair movement of spring and summer fabrics. It is believed that they will find themselves compelled to stock on raw silk at least by the beginning of April.

Active Week on Exchange—The week on the Raw Silk Exchange was quite active, but prices leaned definitely downward. Practically all buying was of the "bargaing" variety. The record sale of 5,440 bales Feb. 19, as noted last week, seemed to have started spirited trading. Importers showed a willingness to "clear at a price," and Feb. 20 was marked by much "bargain" business; the day's turnover totaled 1,450 bales. This price weakness continued on Feb. 21, the eve of the holiday; futures moved actively but at very low levels; the day's turnover was 1,410 bales.

A slight firming tendency marked the opening of the current week, but this did not last. Future prices again softened on Tuesday, sometimes being 7 points off. The weakness brought heavy selling which merely served to accent the downward trend of quotations. Tuesday's session was spirited and business reached the total of 2,460 bales.

Hosiery Stocks Nearer Normal

"Price" Clearance Helps Toward Firmer Market

THERE were indications in the hosiery market that the prevailing weakness may be passing. Prices of women's full-fashioned were still so low that business brought little cheer to producers, but rapid clearance of "bargain merchandise" during the last ten days brought a firmer tone. Worth Street factors, while hesitant to wax enthusiastic, were more encouraged. The overproduction situation has been the bane of the more stable mills, and it is believed in some quarters that stocks now are getting toward normal. However, there is no question but that it will be some weeks before the market fully recovers.

One good sign was the placement of considerable unsolicited business. Numerous jobbers and retailers who had not been called on placed fair-sized orders for women's full-fashioned stockings. Prices have not rallied, but are steadier than they have been.

No-Seam Hosiery in Demand—Thanks partly to the Hosiery Guild's activities and partly to the warm weather, jobbers and retailers have begun extensive buying of no-seam hosiery. This is a month earlier than last year when the much-heralded "bare leg" hosiery started its very successful summer season. Producers of seamless hosiery look for a good warm weather demand.

Those who are affiliated with the Guild naturally endorse that association's contention that seamless hosiery is going to be an all-year proposition. It is too early to do more than prophesy on that score; in any case, the prospects are good for the summer demand. In support of the all-year claim, one Guild supporter pointed out that considerable business in no-seam hosiery now being placed falls in the medium shades rather than in the nudes.

Call for Seamless Machines—The new 340-needle circular machine sold actively during the week; an idea of the extent of this demand may be gathered from the fact that one mill placed an order for 50 of these machines. Knitters of no-seam hosiery now are busily producing. A fair amount of business has been placed and inquiries are coming in steadily, but the present situation stresses production rather than sales.

Men's Half-Hose Selling—Men's 50c. half-hose were in fair call; orders accented the neat effects in lively colors. All-overs were definitely out of it this spring, mill agents asserted.

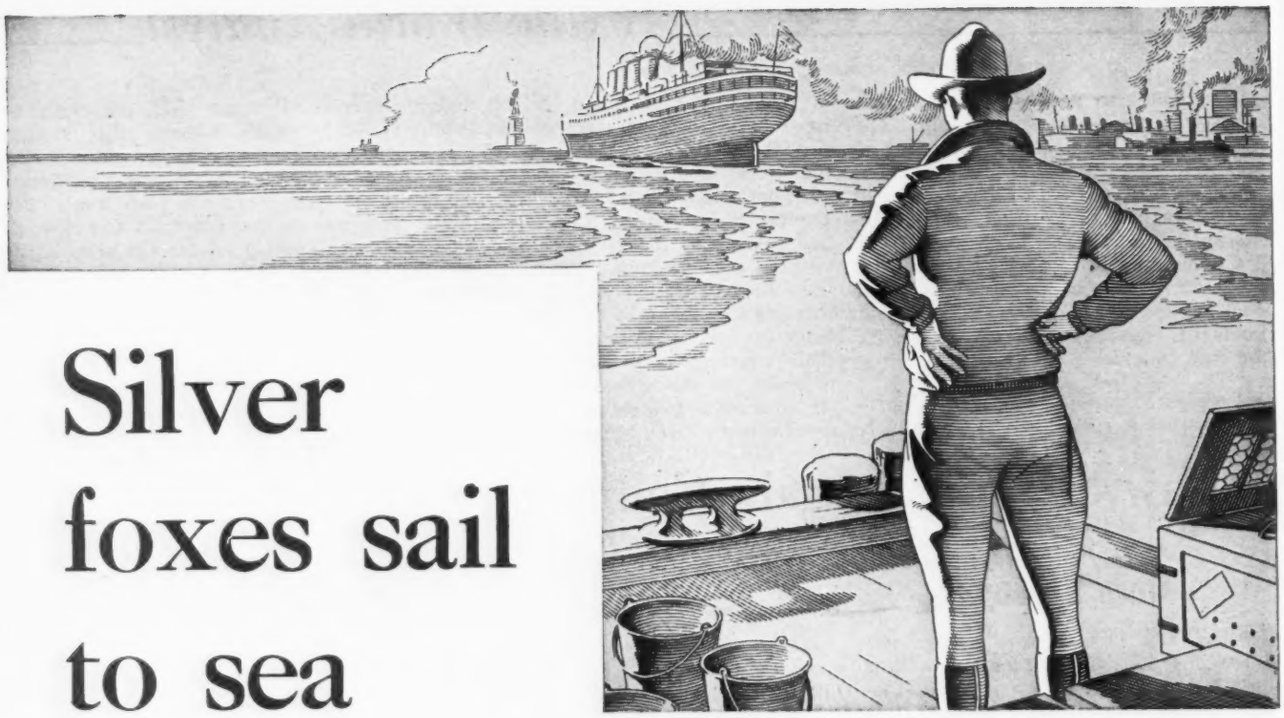
◆Warm Spell Aids Outerwear Sales

THE warm weather of last week added further strength to an already strong outerwear market. Bathing-suits were particularly active; numerous jobbers and retailers placed re-orders, although the original contracts will not be filled probably until April. All bathing-suit lines were in demand; just prior to Washington's Birthday there was a rush of orders for women's popular-priced sunbacks and men's speed models; suits made to retail at from $2.50 to $3.50 were the leaders.

Knitters made the usual predictions about a possible bathing-suit shortage in May, but this year these forecasts have more weight than usual. Certainly, with all mills now at capacity production and numerous important firms refusing business prior to June, an early summer shortage would seem highly probable.

New Suntan Shade Popular—Color preference in bathing-suits this week ran the gamut of the solid colors; blues, blacks, greens and reds were in active call. Especial interest centered about the new suntan shade. This shade is being knitted in worsted suits, and has won quick favor among buyers. There were indications that this color may be a big hit, as it ties up with the sunburn vogue. Pastels were still important.

Sweaters Generally Steady—Staple sweater demand was spotty, with some mills writing considerable fall business, and others very quiet. The general tone



Silver foxes sail to sea

These 238 bushy-tailed "treasures" traveled three thousand miles across the continent before their sturdy northwestern breeder placed them aboard the Norway-bound ship.

After seeing them all comfortably settled for the voyage, the Seattle fox-farmer came to us with complete invoices and bills of lading asking for payment.

One of our Hamburg correspondents, on behalf of a Norwegian client, had instructed us to pay for this curious cargo upon presentation of shipping documents.

But, such an odd shipment demanded more than the usual papers. So our Export Letter of Credit Division asked for a certificate of good health and for an insurance policy covering the foxes' lives. These were produced and immediately a check exchanged hands.

Absolute accuracy and thorough examination of the multitudinous papers necessary for every import and export transaction are as essential to us as are the correct figures on a check to you. Yet complete sets of documents are prepared and scrutinized by our experts in an amazingly short time.

Sending live foxes to sea is indication of the extensive and varied scope of our world-wide experience, covering almost every type of merchandise that comes into or sails out of this country.

What is your foreign problem?

Through our 11,000 carefully chosen foreign correspondents; our branch offices in London, Paris and Mexico City; our subsidiary banks in Shanghai, Hongkong and Tientsin; and through our experienced personnel in New York, we are helping many American corporations to develop and strengthen their connections abroad.

If you have a trade problem—a surplus to sell abroad, or a home market to fill—we invite you to discuss it with us, either in your own office or at any one of ours.

TO SPAN INTERNATIONAL BARRIERS

FOREIGN DEPARTMENT

The Equitable Trust Company
OF NEW YORK

A merger of The Seaboard National Bank and The Equitable Trust Company

Head Office: 11 Broad Street

District Representatives: Philadelphia—Packard Bldg. San Francisco—Financial Center Bldg. • Baltimore—Garrett Bldg. Atlanta—Healey Bldg. Chicago—105 South La Salle St.

LONDON · PARIS · MEXICO CITY

Total resources more than $900,000,000

was steady. Popular-priced shakers, and pullovers, both V and crew neck, were selling ahead of last year, heavyweight producers asserted. Lightweight sweaters were improved by the mild weather which spurred consumer interest in outdoor sports. Polo shirts especially were in demand, and buyers showed interest in the new novelty polos, but the solid colors such as turkey red continued to lead.

◆Underwear Demand Slightly Improved

SPRING underwear demand reacted only slightly to the improved weather conditions. There was an increased call for all lightweight lines, but business was still behind normal. Balbriggans and cotton running-pants took a spurt; buyers placed considerable business, mostly nearby, on these lines.

Rayons, however, were the strongest feature of the week; there was a steady and powerful call for the better ranges of rayon underwear; producers reported a trend toward future commitments. The week brought a healthier tone to the spring and summer underwear market. Knitters were encouraged by the firmness of recent weeks, and producers of summer lines look for a further gain in demand throughout March.

Heavyweight underwear moved sluggishly. Buyers showed an inclination to hold off fall commitments. The warm spell helped retail sales, but heavyweights have not yet felt the benefit. Producers of heavyweights look for increased buying, once spring lines are cleared. Retailers and jobbers' stocks of 1930 fall lines are very low, and they will be obliged to "buy big" within the next few months, to cover for fall, it is believed.

◆Broadsilks Call Emphasizes Rayons

THE broadsilk market held firm, with strong interest in rayon fabrics, and a further trend toward spot buying of chiffons. A shortage was reported by some mills on the rayon lines; rayon crepes sold spiritedly, especially the new prints, and demand was in excess of output; certain firms were asking two to three weeks leeway on shipment.

Small designs favored in Silk Crepes—Small designs were favored in the new crepes, dark backgrounds also were preferred.

Chiffons Active—There was a firm call for summer chiffons, mostly for spot shipment. Chiffon sales were well ahead of this time last year, and the large floral patterns continued to lead. Dress manufacturers catering to spring trade were buying dark shades; interesting combinations of black-and-white, and various mixtures of blues, browns or greens, were in demand. Greens had been slower than usual, but picked up considerably this week. Chiffon pastels for summer dresses gained.

Still Sampling Shantungs—Shantungs were still in the sampling stage, with a fair quantity of early business; prints and plains were equally popular; manufacturers frequently bought the two for combination effects in sport ensembles; this demand stressed small geometric patterns, plaids and self-color stripes.

Rayons Steady—All-rayon fabrics were in good call for beach pajamas and kimonos. Gay blue and yellow mixtures were accented, especially two numbers quoted at $1.65 to $1.85. Another all-rayon quoted at $1.35 was very active and mills were short of supplies.

Print Cloths Touch Low Level

Rapid Drop Follows Cotton Decline And General Business Weakness

WEAKNESS in raw cotton, coupled with similar declines in wheat and other commodities, had Worth Street in rather a blue mood at the outset of the current week. Road-men, recently returned from the Middle-West, tell of generally unfavorable business conditions and serious unemployment. Confronted with the prospect of impaired consumer purchasing power, wholesalers are naturally reluctant to place forward commitments. Such business as occurs is conducted almost wholly on a fill-in basis, and customers are waiting.

Print Cloths—In the forepart of this week, cotton dipped to a new low for the year, serving as a killing frost on any budding transactions. Under this combined influence, print-cloth quotations returned to the lows of three weeks ago. Not all sellers succumbed, but goods were reported available in quantity at the lows. The 38½ in. 64x60s could be had for 6¼c., nearby delivery, with other constructions at comparable figures.

Sheetings—Most constructions were in limited demand with prices nominal. There were reports of good-sized sales at 4⅞c. for nearby delivery of 40 square 6.15s, a slight advance over previous quotations.

Raw Cotton—The unsettlement in the staple gave an ever-changing appearance to goods prices. Sellers would show a tendency towards firmness as cotton recovered and vice-versa.

Sheets and Pillow Cases—It was expected that producers of sheets and pillow cases would name new prices within the next few days. Unless there is some last-minute change, coming lists will be renewed or, at the most, show minor revisions.

Uncertain Wool Goods Market

Business Slow, and Buyers Continue to Hold Back

A FEELING of uneasiness was apparent in wool-goods circles during the forepart of the current week. This was brought to a head by the recent announcement of the American Woolen Co. regarding the revision of staple prices. Not that the big company was blamed in any way—in fact, they were lauded for their original attempt at naming prices that would show some small profit to the manufacturers of staples. Putting it mildly it was unfortunate that certain mills saw fit to open staples at lower levels, necessitating a readjustment on the part of the American and other mills who had attempted to stabilize the market.

Fancy Suitings—The effect of this state of affairs on fancy suitings is problematical. The market has not "broken open," and buyers in their hearts know the truth of the whole matter. It is merely that the attempt of a few mills to make a profit has gone awry. Prices are now where they might well have been at the opening. Business is inactive and the condition of the market gives buyers another excuse to hold back and wait.

Fall Openings—Present signs indicate that the majority of openings will take place after March 3. A few openings are expected this week, but the rest of the houses are holding up until buyers lose some of their present indifference. It is thought likely that at that time medium- and better-grade lines will show reductions of 12½-15c.

Stocks—Mill-stocks remain in liquid state, but the quantity of goods on hand in clothiers' establishments is a matter of conjecture. Clothing sales have been none too good, yet it is believed that, in view of hand-to-mouth buying operations, suiting stocks are not excessive.

QUOTATIONS

at close of business, Feb. 26, 1930
Prices cover average qualities unless otherwise stated

Cotton Goods

	Feb. 19	Feb. 11	Feb. 27 1929
PRINT CLOTHS			
27 -in., 64x60, 7.60..	4¼ -4¼c.	4¼-4¼c.	5½c.
38½-in., 64x60, 5.35..	6½ -6¾c.	6¾-6¾c.	7½c.
39 -in., 68x72, 4.75..	7½ -7¾c.	7¾-7¾c.	8¾- 8¾c.
39 -in., 72x76, 4.25..	8¼c.	8¼c.	9¼c.
39 -in., 80x80, 4.00..	9 c.	9 -9¼c.	10¼-10½c.
BROWN SHEETINGS			
36-in., 56x60, 4.00...	7¾c.	7¾c.	8¼-8¼c.
36-in., 48x48, 3.00...	9¼c.	9¼c.	10½c.
37-in., 48x48, 4.00...	7 c.	7 -7¼c.	8-8¼c.
PAJAMA CHECKS			
36½-in., 72x80, 4.70..	7¼-7¾c.	7¾-7¾c.	8¼-8¼c.
36½-in., 64x60, 5.75..	6¾c.	6¾c.	7¼c.
MISCELLANEOUS			
Drills, 37-in., 3 yd....	9¼c.	9¾c.	11½c.
Denims, 2.20.....	15c.	15 c.	17½c.
Tickings, 8 oz.....	19½c.	19½c.	21½-23c.
Standard prints.....	9¼c.	9¼c.	9c.
Eastern staple ginghams, 27-in.....	10c.	10c.	10½c.

Cotton Waste

Peeler comber	13 —13¼
Peeler strips	11¼—12
Sak. comber	11¼—12
Choice willowed fly	6 — 6¼
Choice willowed picked	5 — 5¼
Sak. strips	14 —15
Linters (mill run)	3¼— 4
White spooler (single)	9 — 9¼

Cotton Yarn

CARDED—(Average Quality)
Double carded 2c.-4c. higher according to quality

SINGLE SKEINS OR TUBES—(Warp Twist)

4s to 8s..	$0.26½-0.27	20s.....	$0.29½-0.30
10s.....	.27 - .27½	24s.....	.31½- .32
12s.....	.27½- .28	26s.....	- .32½
14s.....	.28 - .28½	30s.....	.34½- .35
16s.....	.28½- .29	40s ex.qual.	.47½- .48½

TWO-PLY SKEINS AND TUBES

8s-2.....	$0.26½	26s-2.....	$0.34
10s-2.....	- .27	30s-2.....	.35
12s-2.....	- .27½	36s 2.....	.40- .42
14s 2.....	- .28½	40s-2.....	.43- .44
16s-2.....	- .29	40s-2 hi b'k	.48- .49
20s-2.....	- .30½	50s-2.....	- .52
24s-2.....	- .33	60s-2.....	- .60

SINGLE WARPS

10s.....	$0.27 -0.27½	24s.....	$0.32
12s.....	.27½- .28	26s.....	- .33
14s.....	.28 - .28½	30s.....	- .36
16s.....	.28½- .29	40s ex.qual.	.48½- .49
20s.....	.29½- .30		

TWO-PLY WARPS

8s-2.....	$0.27 -0.27½	24s-2.....	$0.33½-0.34
10s-2.....	.27½- .28	26s-2.....	- .34½
12s-2.....	.28 - .28½	3 1s-2.....	- .35½
14s-2.....	.28½- .29	4)s-2 ordin.	.43½- .44
16s-2.....	- .29½	50s-2.....	- .52
20s-2.....	.30½- .31	60s-2.....	- .60

8s-2 and 4-ply skeins and tubes; tinged, .24; white .26; waste .22

HOSIERY CONES (Frame Spun)

8s.....	$0.26	22s.....	$0.30
10s.....	.26 - .26½	24s.....	.31 - .31½
12s.....	.26½- .27	26s.....	.32½- .33½
14s.....	.27½- .28	30s tying...	- .33½
16s.....	.28 - .28½	30s reg.....	.34½- .35
18s.....	.28½- .29	30s ex.qual.	.35½- .36½
20s.....	.29 - .29½	40s.....	- .42

COMBED PEELER—(Average Quality)
WARPS, SKEINS AND CONES

	Merc. Tw.	Wp. Tw.		Merc. Tw.	Wp. Tw.
20s-2.....	$0.43	.44	60s-2.....	$0.63	.64
30s-2.....	.49	.50	70s-2.....	.73	.74
36s-2.....	.50	.51	80s-2.....	.85	.86
40s-2.....	.51	.52	90s-2.....	1.02	1.08
50s-2.....	.56	.57	100s-2.....	1.29	1.33

SINGLES

12s.....	$0.36½	30s.....	$0.46 -0.47
14s.....	- .37	38s.....	.49 - .49½
16s.....	- .37½	40s.....	.50 - .51
18s.....	- .38	50s.....	.54½- .55½
20s.....	- .39	60s.....	.62 - .63
24s.....	- .41½	70s.....	.72 - .73
28s.....	- .44½	80s.....	.84 - .85

MERCERIZED CONES—(Combed, Ungassed)

26s-2.....	$0.62 -0.64	90s-2.....	$1.45 -1.50
30s-2.....	.63 - .65	100s-2.....	1.75 -1.80
36s-2.....	.66 - .67	120s-2.....	2.15 -2.20
40s-2.....	.68 - .70	30s.....	.77 - .80
45s-2.....	.71 - .73	40s.....	.82 - .84
50s-2.....	.73 - .75	50s.....	.87 - .90
60s-2.....	.82 - .85	60s.....	.94 - .99
70s-2.....	.97 -1.00	70s.....	1.10 -1.15
80s-2.....	1.09 -1.12	80s.....	1.32 -1.37

COMBED REVERSE TWIST THREAD YARNS
(Skeins, Tubes or Cones, 2, 3 and 4-Ply)

	Peeler Average	Peeler Best	Sakelarides Average	Sakelarides Best
24s.....	$0.49	$0.58-0.59	$0.69	$0.74
30s.....	.52	.61- .62	.72	.77
36s.....	.54	.63- .64	.75	.80
40s.....	.59	.67- .68	.79	.84
45s.....	.64	.72- .73	.84	.89
50s.....	.69	.77- .78	.89	.94
60s.....	.79	.87- .88	.99	1.04

Cotton Prices and Statistics

FLUCTUATIONS OF FUTURES

	Closed Feb. 20	For High	Week Lw	Closed Feb. 26	Net Change
February..	15.29	.....	.....	.....	.....
March.....	15.31	15.40	14.67	15.05	—.26
April.....	15.43	15.43	14.94	15.19	—.24
May.....	15.59	15.67	14.95	15.33	—.26
June.....	15.60	15.60	15.20	15.44	—.16
July.....	15.80	15.87	15.18	15.57	—.23
August....	15.84	15.84	15.38	15.63	—.21
September.	15.89	15.89	15.44	15.69	—.20
October....	15.97	16.04	15.41	15.78	—.19
November.	16.06	16.06	15.56	15.88	—.18
December..	16.17	16.24	15.62	15.97	—.20
January...	16.24	16.26	15.73	16.05	—.19

MIDDLING SPOT FLUCTUATIONS FOR WEEK

	New York	New Orleans	Liverpool
Friday, Feb. 21	15.30	15.03	8.47
Saturday, Feb. 22		Holiday	.....
Monday, Feb. 24	14.90	14.62	8.34
Tuesday, Feb. 25	15.10	14.83	8.31
Wednesday, Feb. 26	15.15	14.98	8.44
Thursday, Feb. 27	15.35	15.21	8.40

SPOT FLUCTUATIONS AND STOCKS

Market	Feb. 19	Feb. 26	Sales	Stocks This Week	Stocks Last Year
Galveston..	15.55	15.35	3,102	371,269	490,913
New Orl'ns	15.04	14.98	7,425	474,480	334,369
Mobile....	14.85	14.70	.....	35,286	37,409
Savannah..	14.99	14.83	12	62,554	41,063
Norfolk....	15.38	15.25	1,224	65,129	92,359
New York..	15.40	15.15	424	99,179	88,208
Augusta...	15.38	15.25	610	93,773	78,402
Memphis..	14.55	14.55	12,632	397,627	254,308
St. Louis...	14.75	14.25	.....	13,981	26,145
Houston...	15.45	15.25	9,311	982,751	823,199
Dallas.....	14.75	14.80	5,783	.....	.....

BASIS MIDDLING

	Saturday Feb. 22	Saturday Feb. 15
10 markets average	14.96	15.42
Memphis	14.75	15.05

PREMIUM STAPLES

First Sales from Factors Tables at Memphis

Grade Strict Middling	Prices Nominal
1⅛-in	18.40 – 18.65c.
1 3/16-in	19.65 – 19.90c.
1¼-in	23.25 – 23.75c.

CURRENT SALES

	For Week	Prev. Week	Week Before
Memphis total	10,524	20,112	8,388
F.o.b. included in total.	9,633	15,241	7,367
10 markets	48,414	56,056	41,381

MEMPHIS RECEIPTS, SHIPMENTS, ETC.

	For Week	Last Year	Year Before
Net receipts	16,336	12,663	10,504
Gross receipts	36,602	35,052	24,556
Total since Aug. 1, net.	835,758	718,836	557,109
Shipments	39,561	35,597	24,563
Total since Aug. 1	1,299,759	1,261,496	1,077,891
Total stock	395,541	256,476	235,660
Decrease for week	2,955	545	7
Unsold stock in hands of Memphis factors..	50,397	.....	.....
Increase for week	10	.....	.....

AVERAGE PRICE FEB.-MARCH SHIPMENT HARD WESTERN COTTON

	Middling	St. Middling
1 1/32 in	18½–19c.	19½–20c.
1⅛ in	19½–20c.	20½–21c.
1 3/16 in	20⅜–21½c.	22 –22½c.
1¼ in	25 –26c.	27 –28c.

Basis on New York, May, 15.56c.

DIFFERENCES ON AND OFF MIDDLING
WHITE GRADES

	Dallas	Memphis	Montgomery	Augusta	Average
M. F.....	1.05†	.90†	1.00†	1.25†	1.07†
S. G. M.....	.90†	.65†	.90†	1.00†	.89†
G. M.....	.75†	.50†	.75†	.75†	.72†
S. M.....	.50†	.35†	.50†	.50†	.50†
S. L. M.....	.75*	.75*	.85*	.75*	.75*
L. M.....	1.75*	1.50*	1.75*	2.00*	1.70*
S. G. O.**....	3.00*	2.50*	2.75*	3.25*	2.80*
G. O.....	4.00*	3.50*	3.75*	4.25*	3.78*
YELLOW TINGED					
G. M.....	.50*	.50*	.50*	.50*	.50*
S. M.....	1.00*	1.00*	1.00*	1.00*	1.00*
M.**.....	1.75*	1.50*	1.50*	1.50*	1.60*
S. L M.**....	2.50*	2.00*	2.25*	2.25*	2.27*
L. M.**.....	3.25*	3.00*	3.00*	3.00*	3.15*
YELLOW STAINED					
G. M.....	1.50*	1.50*	1.50*	1.50*	1.50*
S. M.**.....	2.25*	2.25*	2.50*	2.50*	2.35*
M.**.....	3.00*	2.75*	3.50*	3.50*	3.15
BLUE STAINED					
M. G.**.....	1.75*	1.25*	1.75*	1.75*	1.65*
S. M.**.....	2.25*	2.00*	2.75*	2.75*	2.40*
M.**.....	3.00*	2.50*	3.75*	3.75*	3.18*

**Grades not deliverable on contract. †On Middling. *Off Middling.

EGYPTIAN COTTON

February-March Shipment c.i.f.	Boston	Change
Fully good fair Sak	29.80	.....
Fully good fair to good uppers	22.05	.....
(By John Malloch & Co.)		
Alexandria Exchange, Feb. 26		
March Sak	27.50	.....
April uppers	19.43	.....

Wool

OHIO, PENNSYLVANIA AND WEST VIRGINIA

Fine delne.	$0.33 –$0.34	¾ blood	$0.36 –$0.37
Fine clthg.	.24 – .25	½ blood	.36 – .37
¼ blood	.35 – .36		

TEXAS AND CALIFORNIA

Texas, 12 months	$0.75 –$0.78
California, Northern	.70 – .72

PULLED—EASTERN (SCOURED BASIS)

A.A.	$0.83 –$0.85	B-Super	$0.65 –$0.70
A-Super	.75 – .78	C-Super	.58 – .60

MONTANA, IDAHO AND WYOMING (SCOURED BASIS)

Staple fine	$0.78 –$0.80
Staple ¾ bld	.76 – .78
Fine and fine medium	.73 – .75
¾ bld. blood	.68 – .70
½ blood	.65 – .67

MOHAIR—DOMESTIC

Best carding	$0.40 –$0.43
Best combing	.57 – .60

MOHAIR FOREIGN (IN BOND)

Turkey fair, average	$0.35 –$0.38
Cape firsts	.35 – .38

FOREIGN CLOTHING AND COMBING (IN BOND)

Australia:	
70s	$0.71 –$0.73
64s	.58 – .60
58s-60s	.51 – .53
Montevideo:	
58-60s	$0.25 –$0.26
56s	.25 – .26
50s	.24 – .25
Buenos Aires:	
4s, 40-44s	$0.21 –$0.22
5s, 36-40s	.18 – .19

FOREIGN CARPET (GREASE BASIS IN BOND)

China: Combing No. 1	$0.23 –$0.24
China Filling Fleece	.22 – .24
Szechuen ass't	.23 – .24
Cordova	.20 – .22
Scotch black face	.23 – .24
East India: Kandahar	.32 – .34
Vican'r	.37 – .39
Joria	.37 – .39
Aleppo	.35 – .36

Worsted Yarns

ENGLISH SYSTEM WEAVING

2-20s, 36s	$1.00 – 1.05
2-24s, 40s	1.10 – 1.15
2-26s, 44s	1.20 – 1.25
2-28s, 46s	1.22½ –1.27½
2-30s, 48s	1.32½– 1.37½
2-32s, 50s	1.35 – 1.37½

(Single yarns 5c. less than above)

2-36s, 58s	1.52½– 1.55
2-40s, 60s	1.57½– 1.60
2-40s, 64s	1.60 – 1.62½
2-50s, 66s	1.82½– 1.87½
2-60s, 70s	2.30 – 2.35

ENGLISH SYSTEM KNITTING

2-20s, 44s in oil	$1.10 –$1.15
2-20s, 50s in oil	– 1.22½
2-20s, 56s in oil	1.37½– 1.40
2-20s, 60s in oil	1.52½– 1.55
2-20s, 64s in oil	1.57½– 1.60
1-15s, 46s dyed	1.30 – 1.32½
1-15s, 48s dyed	1.32½– 1.35

FRENCH SYSTEM

1—20s, 58s	$1.35 –$1.40
1—20s, 60s	1.40 – 1.45
1—26s, 64s	1.45 – 1.47½
1—30s, 60s..Warp	1.55 – 1.57½
1—30s, 64s..Warp	1.60 – 1.62½
2—30s, 64s..Fancy mixes	1.80 – 1.85
2—40s, 64s..Zephyrs	1.75 – 1.77½
1—50s, 66s	1.75 – 1.80
2—50s, 66s	1.87½– 1.90
1—60s, 70s	2.17½– 2.22½
2—60s, 70s	2.32½– 2.37½

FRENCH SPUN MERINO WHITE

1-30s, 50-50-58s on cops	$1.15 –$1.17½
1-40s, 50-50-60s on cops	1.30 – 1.32½
1-40s, 50-50-64s on cops	1.32½– 1.35
1-40s, 50-50-64s Australian cops	1.35 – 1.40

Underwear mixes, 3c. additional.
Solid color, 35c. additional.

◆

Tops and Noils

TOPS—BOSTON

Fine (64-66s)	$1.00 –$1.05
Half-blood (60-62s)	1.00 – 1.03
High ¾ blood (58s)	.98 – 1.00
Aver. ¾ blood (56s)	.95 – .98
Low ¾ blood	.95 – .97
High ½ blood (50s)	.93 – .95
48s N. Z.	.91 – .93
46s S. A. and N. Z.	.88 – .90
44s S. A. and N. Z.	.83 – .85
40s S. A. and N. Z.	.81 – .83
36s S. A. and N. Z.	.80 – .82

TOPS—BRADFORD, ENG. (FEB. 20)

Fine (70s)	32d	¾ bld. (56s)	22 d
Fine (64s)	29d	½ bld. (50s)	18½d
½ bld. (60s)	27d	Cross-bred (46s)	15½d
¼ bld. low (58s)	25d		

NOILS—BOSTON

Fine	$0.52–$0.55	Low ¾ bld.	$0.43–$0.46
Half-bld.	.48– .50	High ½ bld.	.41– .43
High ¾ bld.	.50– .53	46s	.40– .42
Aver. ¾ bld.	.44– .46	44s	.38– .40

Wool Substitutes

WOOL WASTE

Lap, fine white	$0.78 –$0.85
Lap, fine colored	.60 – .65
Thread White Worsted, fine	.63 – .65
Thread White Worsted, ¼ blood	.43 – .45
Fine Colored Spinning, Hard Ends	.35 – .38
Medium Colored Spinning, Hard Ends	.25 – .30
Card, fine White	.30 – .40
Fine Burr Carbonizing	.35 – .45

OLD WOOLEN RAGS (GRADED FOR MFRS.)

Merinos, Coarse Light	$0.07 –$0.07½
Merinos, Fine Dark	.05 – .05½
Merinos, Fine Light	.15½– .16
Serges, Blue	.09 – .09½
Serges, Black	.08½– .09
Serges, Red	.11½– .12½
Knit, White	.34 – .35
Knit, Red	.18 – .19
Knit, Light Hoods	.19 – .20
Worsted, Light	.06 – .07
Worsted, Blue	.09 – .09½
Worsted, Black	.08 – .08

Silk Yarns

THROWN SILK (60 day basis)

Japan organzine, 2 thd. grand XX in skeins	$6.05
Japan organzine, 2 thd. sp. crack in skeins	5.80
Japan crepe, 3 thd. grand XX in bobbins	6.15
Japan crepe, 3 thd. sp. crack on bobbins	5.80
Japan crepe, 4 thd. crack on bobbins	5.75
Canton crepe, 3 & 4 thd. ns. 14/16 on bobbins	3.75
Tussah tram, 2 end on cops	2.45
Hosiery tram, 3 thd. Japan XXX	6.50
Hosiery tram, 5 thd. Japan G XX	5.80
Hosiery tram, sp. crack XX	5.40
Hosiery tram, crack XX	5.30
Hosiery tram, XX	5.20

SPUN SILK YARNS—(Terms: net 30)

40/2	$4.25	60/2	$4.55
50/2	4.40	62/1	3.50

Raw Silk

(60 day basis)

Japan filature, grand XX, 13/15	$5.10
Japan filature, sp crack XX, 13/15	4.90
Japan filature, crack XX, 13/15	4.70
Japan filature, XX, 13/15	4.65
Japan filature, best X, 13/15	4.55
Japan filature, X, 13/15	4.45
Canton filature, new style, 14/16	2.75
Canton filature, new style 20/22	2.65
Tussah filature, 8 cocoon	1.80
Grand XX (Yellow) 20/22	4.70
Grand XX (White) 20/22	4.65
Sp. crack (Yellow) 20/22	4.65
Sp. crack (White) 20/22	4.65
Crack (Yellow) 20/22	4.65
Crack (White) 20/22	4.55

NATIONAL RAW SILK EXCHANGE

	Close Feb. 19	For the High	Week Low	Close Feb. 25	Net Chg.
February	4.48	4.48	4.34	....	.....
March	4.43	4.46	4.35	4.30	—.13
April	4.43	4.49	4.29	4.30	—.13
May	4.39	4.42	4.28	4.29	—.10
June	4.40	4.42	4.27	4.30	—.10
July	4.35	4.38	4.26	4.28	—.07
August	4.35	4.37	4.26	4.26	—.09
September	4.35	4.35	4.24	4.28	—.07
October	....	4.27	4.25	4.27	.....

Feb. 19 to Feb. 25—Total contracts 1,219. Total number of bales 12,190. Total approximate value, $7,314,000.

Domestic Rayon

VISCOSE PROCESS

Denier	Filament	First Quality	Second Quality
75	18	$2.35	$1.65
75	30	2.45	1.75
100	18	1.95	1.60
100	40	2.00	1.65
125	18	1.45	1.25
125	36	1.50	1.30
150	24–32	1.15	1.10
150	36	1.20	1.15
150	60	1.35	1.30
150	75	1.50	.....
170	24–27	1.15	1.10
170	60	1.35	1.30
200	30–32	1.10	1.05
200	60	1.30	1.25
300	40–60	1.00	.95
400	72	1.10	.95
450	54	1.00	.95
600	72–96	1.00	.95
900	100–144	1.00	.95

NITRO-CELLULOSE PROCESS

Denier	First Qual.	Second Qual.	Denier	First Qual.	Second Qual.
35	$3.50	$3.25	125	$1.45	$1.25
50	2.75	2.50	140	1.15	1.10
75	2.35	1.65	150	1.15	1.10
100	1.95	1.60	160	1.15	1.10
			175	1.15	1.10

CUPRAMMONIUM PROCESS

Denier	Filament	Price	Denier	Filament	Price
15	25	$4.15	40	30	$3.15
25	25	3.65	52	30	3.00
30	25	3.40			

(Due to diversified offerings prices for higher denier are not listed.)

ACETATE PROCESS

Denier	Price	Denier	Price
45	$2.75	120	$1.90
55	2.55	150	1.60–1.85
75	2.25–2.70	200	1.55
100	2.00–2.45	300	1.50

Rayon Waste

Open bleached waste	$0.30
Open unbleached waste	$0.24 – .26
Bleached thread waste (mfs.)	..... .15
Bleached thread waste (misc.)	..... .11
Colored thread waste	.08 – .10
Colored clips	..... .12

CONVERTED RAYON WASTE

Bleached tops	$0.59 –$0.60
Unbleached tops	.51 – .52
Bleached noils	..... .22
Bleached garnets	.23 – .25
Unbleached garnets	.21 – .23
Colored garnets	.16 – .20

◆

TRIETHANOLAMINE is an odorless, rather viscous, hygroscopic liquid slightly yellow in color and boiling at 277-279°C. It possesses distinctive features of wide interest to the textile industry. • Triethanolamine forms soaps with the fatty acids of all common vegetable oils by merely mixing the acid and the base, no heat being required. These soaps are characterized by their

- **1. NEUTRALITY** — pH about 8.6.
- **2. EASE OF PREPARATION.**
- **3. HARMLESS ACTION UPON WOOL WORSTED AND SILK.**
- **4. HIGH DETERGENCY.**
- **5. STRONG EMULSIFYING ABILITY.**
- **6. HARMLESS EFFECT UPON DYED STOCK.**

Triethanolamine is the weakest alkali commercially available. Its alkalinity is about one-sixth that of ammonia, its pH 10.2. The low alkalinity is important in the more complete neutralization of oil acidity; for example, neutral or slightly alkaline oils for use in lubricating, soaking or knitting processes may be formulated by the simple addition of Triethanolamine or Triethanolamine soaps to the oil. Corrosion is thus eliminated and loosening of silk sericin is no longer encouraged. • When used for the fulling and scouring of wool or worsted piece goods, Triethanolamine oleate, because of its neutrality and softening properties, produces finishes not obtained with other soaps. • For further information, consult our technical division.

TRIETHANOLAMINE

CARBIDE AND CARBON CHEMICALS CORPORATION
Carbide and Carbon Building
Thirty East Forty-second Street, New York

Unit of Union Carbide UCC *and Carbon Corporation*

PRODUCTS MANUFACTURED BY THE CARBIDE AND CARBON CHEMICALS CORPORATION

ACETONE	ETHYLENE CHLORHYDRIN
BUTYL CARBITOL★	ETHYLENE DICHLORIDE
BUTYL CELLOSOLVE★	ETHYLENE GLYCOL
CARBITOL★	ETHYLENE OXIDE
CELLOSOLVE★	ISOPROPANOL
CELLOSOLVE★ ACETATE	ISOPROPYL ETHER
DICHLOR ETHYL ETHER	METHYL CELLOSOLVE
DIETHYLENE GLYCOL	METHANOL
DIOXAN	TRIETHANOLAMINE
ETHYLENE GAS	VINYL CHLORIDE
VINYLITE★ RESINS	

★*Trade-mark Registered*

Microscope as Arbitrator

(Continued from page 69)

undyed yarn are alike in this respect, as is seen in Figs. 5, 6, and 7.

If the yarns were made from the same blend of stock, they must have been made from two or more lots of wool and the batches laid down at different times with different percentages of each stock. If the blends were laid down at the same time, then they were not sufficiently mixed to prevent segregation. The photomicrographs disclose no visible injury to the fibers; therefore the theory that the yarn had been over-dyed or otherwise injured in processing was disproved, and improper blending was established as the cause of the defect.

Wayne Hosiery Dyehouse

(Continued from page 78)

the monel-metal pails provided with spouts with fine mesh screens.

A most important factor in all dyeing operations is that of the water used which for the very best results must be free from hardness and practically free from alkalinity. At this plant these results are accomplished satisfactorily by means of a combined Permutit filter and zeolite softening plant, which reduces the raw water to zero hardness free from suspended matter. An automatically controlled dilute-acid feeding plant which reduces the alkalinity to a harmless minimum is also employed. A dilute solution of silicate is automatically fed to the water for the purpose of providing a thin protective coating on the inside of the pipes to prevent corrosion. About 100,000 gal. of water are treated daily. The softened water is stored in tanks of 100,000 gal. capacity, first being thoroughly aerated by passing over coke beds and aerating troughs. During operation the water is tested hourly. The water-treating plant is located in an independent fire-proof enclosure adjacent to the power house.

The design and construction of the dyehouse were under the direction of Lockwood Greene Engineers, Inc.

New Water Works

(Continued from page 73)

pumps raise the filtered water to the new elevated storage tank in the mill yard nearby. The pumps are driven by 40-hp. squirrel-cage electric motors with automatic-control apparatus.

These pumps are controlled not only by a float switch actuated by the water level in the filtered water reservoir, but also by a mercury U-tube type of tank-level controller actuated by the water level in the elevated steel tank.

In order to maintain a proper pressure in the water-distribution system of the mill, to supply 25,000 gal. of wash water for the filters daily, and at the same time to care for large fluctuations in the rate of demand for water, a 125,000-gal. steel tank has been erected between the mill buildings. This tank measures about 29 ft. in diameter with storage elevated 17 ft. 10 in. above the surface of the ground. The bottom of the tank and the copper-bearing steel roof are ellipsoidal in shape. A special outlet weir type of overflow with steel down-spout connecting with the drain has also been furnished. This weir is calculated to discharge the full capacity of any of the pumps connected therewith. Concrete foundations for the tank legs and mud drum have been provided of unusual depth, in order to pass through an old 7 ft. diameter wood penstock to a firm foundation underneath. The tank was sand blasted before painting with three coats of red-lead paint, inside and out. The last two coats on the outside contained dark brown and dark green pigments, respectively, to permit easy inspection for coverage.

Additional work in conjunction with the new water supply includes the sinking of a 10-in. well about 150 ft. deep, equipped with a Cook strainer. A 500-gal. per min. vertical motor-driven centrifugal pump was installed connecting with a third well field with the water-distribution system. This pump was manually controlled and equipped with a 15-hp. squirrel-cage motor.

Fundamental Weaves

(Continued from page 68)

ular satin, first determine the number that is to be used as the counter. Add this number to the numeral one (one, here, is the point of interlacing of the first end and pick, and may of course be either a raiser or a sinker, depending upon whether the satin is to be warp flush or filling flush). The sum thus obtained is the pick at which the second end interlaces. To this sum again add the counter, and if the sum then obtained exceeds the number indicating the satin, subtract the satin number to find the pick with which the third end interlaces. Continue adding the counter to each sum, and continue subtracting the number indicating the satin each time the sum exceeds the number of harnesses required, until a difference of one is obtained. The sums and differences indicate the points of interlacing of the successive ends throughout one repeat of the weave.

Illustration. Consider the five-harness satin in which three is used as the counter (Fig. 15). By following the rule given above the process would be as follows:

$1 + 3 = 4 + 3 = 7, -5 = 2, +3 = 5, +3 = 8, -5 = 3, +3 = 6, -5 = 1.$

The numbers that are italicized—1, 4, 2, 5, and 3—are the picks on which the successive ends (beginning with the first left hand end) interlace.

In fabrics constructed of satin weaves it is almost always necessary to use a smaller weave, such as the plain, double plain or rib weave, for the edges.

Fig. 16 shows four repeats each way of the five-harness warp-flush satin weave in which three is used as the counter, and Fig. 17 illustrates a fabric woven in five-harness warp-flush satin order. The edge is a tubular weave and is separated from the body of the material by a few ends of plain weave.

Fig. 18 illustrates a fabric made according to the eight-harness filling-flush satin weave; and Fig. 19 is a design showing two repeats each way of the eight-harness filling-flush satin weave. The counter used is three.

Satins other than the five-harness and eight-harness are seldom encountered in narrow fabrics, excepting in ribbons.

This article is the fourth of a series on the design and construction of narrow woven fabrics by Edwin J. Gibbons, instructor in textile design at Samuel Slater School. Pawtucket, R. I. The first article (Nov. 16) discussed plain, rib and tubular edges. The second (Dec. 28) took up the use of edge wires. The third (Jan. 25) considered tubular weaves. All rights to the further use of these articles are reserved by the author.

Clubwomen Witness Mallinson Style Show

Several thousand New York clubwomen who met in the Hotel Astor, New York City, Feb. 21, at the monthly gathering of the Theater Assembly, witnessed a fashion show staged by H. R. Mallinson & Co., Inc., which demonstrated all the newest Mallinson silks. Living models posed sixteen garments suitable for sportwear, informal day wear, formal afternoon, formal evening, beach and water, and bedroom and sleeping wear.

The garments were shown to the accompaniment of music, and Miss L. M. Callahan, Mallinson stylist, explained the fashion points of each number as it appeared. Miss Callahan stressed the fabric characteristics and qualities of the various Mallinson silks used in making the garments.

The complete program of garments, fabrics and designers follows:

Negligee of Mallinson's Pussy Willow crepe; hostess gown of Lohengrin satin; negligee of Mallinson's Pussy Willow crepe; sports ensemble of Vagabond crepe in combination with Hy-Att brocade; sport suit of Pagoda crepe in combination with printed Pagoda crepe; tailored suit of Hy-Att brocade; sports dress of printed Pussy Willow with new cape treatment; afternoon ensemble of printed Pussy Willow with short jacket of Mallinson's Inaclass crepe; afternoon dress of Mallinson's printed Pussy Willow crepe with new banding treatment; afternoon dress of Mallinson's printed Pussy Willow crepe with new banding effect; dress of printed Pussy Willow; afternoon dress of printed satin-stripe, indestructible flat chiffon; evening dress of indestructible flat chiffon, plain; evening dress of printed indestructible flat chiffon; pajama ensemble of printed Pussy Willow in combination with plain Pussy Willow; two bathing suits of printed Pussy Willow.

Marine Corps Wants Bids on Hosiery

PHILADELPHIA.—Bids be received by the Depot Quartermaster, U. S. Marine Corps, or supplying them with 115,000 prs., cotton socks and 160,000 prs., woolen socks, to be opened March 14 at 1100 S. Broad St., at 11 a.m.

TEXTECH ALUM

TEXTECH—a new grade of textile alum—is commercially pure and technically and especially processed for the textile and rayon industries. *TEXTECH* is free from insolubles and organic stains, and particularly low in iron content. It is the ideal alum for use in purifying water for rayon and other textile plants. We can save you money on your annual contract requirements.

You can use our "Iron Free" Alum confidently for all your process work. Send for sample for analysis.

Our Industrial Chemical Department is at your service for immediate shipment of

TEXTILE CHEMICALS

Strategically situated in Atlanta, distribution center of the South, this department offers you textile chemicals including:

Caustic Soda, Columbia Brand	Muriatic Acid
Soda Ash, Columbia Brand	Sulphuric Acid
Tri-Sodium Phosphate	Hercules Pine Oil
	Linseed Oil
	Turpentine

We are Southeastern Distributors for the Noted "Star Brand" Silicate of Soda, made by Philadelphia Quartz Co.

Full stocks carried in Atlanta.

Let us serve you. *Save money by contracting now for your 1930 requirements on the above chemicals as well as on our alums.*

ATLANTA NEW ORLEANS

GEORGIA-LOUISIANA CORPORATION

HEAVY CHEMICALS

NEW ORLEANS, LA. P. O. Address: Marrero, La. ATLANTA, GA.

Chattanooga Expects Annual Meeting of A.A.T.C.C. Next December

An unofficial report from Chattanooga, Tenn., is to the effect that the annual meeting of the American Association of Textile Chemists and Colorists will be held in that city early in December. The invitation for the association to hold its 1930 meeting in Chattanooga was extended to the textile chemists at their annual convention in Philadelphia last December by Ben Dabbs, of the E. I. DuPont de Nemours Co. Elaborate plans will be made for the meeting in Chattanooga, it was said, and the definite date and place of the gathering is to be announced in the near future.

Fry & Crawford To Represent J. M. & E. M. Abbot

Fry & Crawford, Philadelphia, will not represent Warner J. Steel, Bristol, Pa., after March 1, the selling arrangement between this spinner and selling organization having been terminated, effective at that time. Fry & Crawford have been appointed representatives in Pennsylvania, New Jersey and the metropolitan district of New York for J. M. & E. M. Abbot, Ltd., Lowell, Mass., spinners of English system weaving and knitting yarns. Fry & Crawford maintain offices at 400 Chestnut St., Philadelphia. The New York territory will be covered from 45 E. 17th St., this office being in charge of Irving Cohen.

New Durene Yarn For Picot Edge Hosiery

PHILADELPHIA.—Aberfoyle Mfg. Co., have developed a new Durene yarn which they have called Picotwelt. It is especially adapted for use in picot edge full-fashioned hosiery and permits the manufacturer to use a mercerized or Durene backing on the silk welt of the hose and still obtain good results on picot edge work. The new yarn is preshrunk and it is stated that after it has been dyed the Durene yarn used in the welt will not shrink, permitting the picot edge to remain in its proper place on the stocking.

J. A. Whelan Joins Sales Department of Kilburn Mills

Joseph A. Whelan has become associated with the sales department of Kilburn Mills, New Bedford, manufacturers of combed cotton yarns, and will make his headquarters at the New York office, 1 Madison Ave. Mr. Whelan for some years headed the New York yarn department of Cannon Mills and more recently was associated with the Separk group of mills in a selling capacity.

Grade Differentials for March on Silk Exchange

The adjustment committee of the National Raw Silk Exchange last Monday fixed the following differentials between the basis grade and the premium and discount grades of raw silk deliverable against Exchange contracts during the month of March, 1930:

Grade A, basis grade plus 53c. per pound; B, basis plus 32c.; C, basis plus 13c.; D, basis; E, basis minus 12c.; F, basis minus 18c.; W, basis plus 5c.; X, basis minus 7c.; Y, basis plus 5c.; Z, basis minus 5c.

Eastman Starts a Cellulose Acetate Plant at Kingsport

The new cellulose acetate plant of the Tennessee Eastman Co., Kingsport, Tenn., began operations Feb. 17, but full production will not be reached until summer. The new plant includes a cotton preparation plant, a cellulose acetate mill, an acid recovery building, and also a power plant and water filtration unit. The company has a small experimental rayon manufacturing unit.

Executive Changes at Bancroft & Sons Co.

Joseph Bancroft & Sons Co., finishers, have announced that, incident to the creation of a new division for the finishing of rayons and silks, and another division for waterproofing textiles, numerous personnel changes have been made. W. R. MacIntyre, formerly superintendent of Eddystone (Pa.) Mfg. Co., a subsidiary of the Bancroft company, has been made vice-president and superintendent of the parent Bancroft plant at Wilmington, Del. Mr. MacIntyre's post with the Eddystone company will be filled by Ivan Harlow, former superintendent of the Jones division of Arnold Print Works. Abner R. Overdeer becomes assistant superintendent of the Bancroft Wilmington plant. Covert Filz becomes assistant superintendent of the Eddystone plant.

New Holeproof Co. to Sell Australian-Made Hosiery

W. W. Freschl, vice president in charge of foreign sales of the Holeproof Hosiery Co., announced in New York on Tuesday that a new company to be known as Holeproof Hosiery Co. (Australia), Ltd., has been organized by the Holeproof Hosiery Co. to market full-fashioned and circular knit hosiery manufactured by Staley & Staley, Melbourne, Australia.

Mr. Freschl stated that he had just received a cable from Albert Carson, Holeproof's export manager, advising of the conclusion of negotiations with the Australian manufacturer and of the formation of the new company.

The Australian Holeproof company and Staley & Staley have become mutually interested, financially, according to Mr. Freschl. He added that Mr. Carson had gone out there six months ago with the purpose of reorganizing the company's selling arrangement, but that the new tariff went into effect Nov. 22 and made it impossible for him to give further consideration to the matter of exports to that country, the new rates being prohibitive.

F. C. Niederhauser Elected Vice-President of A. M. Johnson Rayon Mills

The A. M. Johnson Mills, Inc., of Burlington, N. C., announce that Frederick C. Niederhauser has become associated with the firm as second vice-president in charge of plant, production and sales.

Mr. Niederhauser is well known both in America and Europe, having been connected with the Viscose Co., and later with the Industrial Rayon Co. of Cleveland, Ohio and Covington, Va.

This appointment will enable Dr. W. O. Mitscherling, whose time and effort for the last few months has been taken up with the erection and construction of the plant at Burlington, to resume his research work in cellulose as applied to the manufacture of rayon.

When Dr. Mitscherling became associated with the A. M. Johnson Mills, Inc., it was understood that as soon as it could be arranged, he should be relieved of the details of administration and his time be made available for research work. Dr. Mitscherling is having constructed a special laboratory for research and development work in connection with the plant at Burlington. He will still maintain his research laboratory in Bridgeport, Conn.

With the above addition, the officers of the organization will be as follows: Albert M. Johnson, president; Dr. W. O. Mitscherling, vice-president, research and chemical director; Frederick C. Niederhauser, second vice-president and managing director; Kenneth Mullins, secretary.

Scant Burlap Trading at Unchanged Prices

Inactivity on the burlap market, and irregularity in Calcutta caused an indifferent attitude toward futures on the burlap exchange at mid-week. Contract "A" closed slightly lower at that time, with the market quiet and spots at 5.10c.

The 8 oz. 40s for spot and two weeks' arrival were 5.35c.; March shipment, 5.30-5.35c.; April-June, 5.40c.; July-September, 5.45c. The 10½ oz. 40s for spot and two weeks' arrival were 6.70c.; March shipment, 6.60-6.70c.; April-June, 6.70-6.80c.; July-September, 6.90c.

Boston Wool Receipts

Receipts of domestic and foreign wools at Boston, also imports at Philadelphia and New York for the week ended Feb. 24, based upon data compiled by the Market News Service of Bureau of Agricultural Economics, Department of Agriculture, are as follows:

	Week Ended Feb. 24	Totals to Date 1929	Totals to Date 1928
Domestic	280,000	11,815,000	10,200,000
Foreign	1,005,000	13,079,000	28,344,000
Total	1,285,000	24,894,000	38,544,000
IMPORTS AT PRINCIPAL PORTS			
Boston	1,005,000	13,079,000	28,344,000
Philadelphia	923,000	14,435,000	15,537,000
New York	1,353,000	8,989,000	15,667,000
Total	3,281,000	36,503,000	59,548,000

Obituary

John P. Yount

John P. Yount, president, Catawba Cotton Mills, Newton, N. C., and head of the firm of J. P. Yount & Sons, died at his home Feb. 24, following an illness of several weeks. Mr. Yount, who was 71 years of age, was one of the leading business men of Catawba County where he began a small mercantile enterprise in 1878. Later he was organizer of the Newton Oil & Fertilizer Co., and held extensive interests in several textile manufacturing concerns at the time of his death.

Funeral services were conducted from the home Feb. 25 and interment was in Eastover Cemetery at Newton. He is survived by his widow and a son, J. N. Yount, of Newton, who was connected with his father in business.

Rupart M. Simpson

Rupart M. Simpson, president of Joseph Simpson Sons, Ltd., knitted goods manufacturers of Toronto, and one of the best known textile men in Canada, died recently in Nassau, Bahamas. He had been in poor health and had spent his winters there for the last 25 years. Born in the state of Alabama 67 years ago, he went to Canada as a child with his parents. He was educated by private tutor and at Upper Canada College, later entering the business founded by his father. On the death of Mr. Simpson, Sr., 35 years ago, he became president of the firm.

Herbert Stevens

Herbert Stevens, treasurer of the Waldrich Bleachery, Delawanna, N. J., died recently in his 74th year in Passaic, N. J. During most of his active career he was connected with the Waldrich organization, which he joined when it was known as Worthen & Aldrich, with headquarters at Jane St., New York City. He was a finisher of practical experience, but devoted most of his attention to the sales organization of the company until his retirement some five years ago.

◆

Textile Patents

PROCESS for printing with vat dyestuffs. 1,744,140. E. Pfeffer, Frankfort-on-the-Main-Schwahnheim, Germany. Assigned to General Aniline Works, Inc., N. Y. C.

PROTECTING wool, fur, rugs, and the like against the attack of moths, process for and products thereof. 1,744,633. E. Hardtmann and M. Hardtmann, Weisdorf-on-the-Rhine, and P. Kummel, Leverkusen-on-the-Rhine, Germany. Assigned to I. G. Farbenindustrie Aktiengesellschaft, Frankfort-on-the-Main, Germany.

QUILLING machine. 1,744,060. G. Sipp, Paterson, N. J. Assigned to Sipp Eastwood Corp., Paterson, N. J.

RACK for warp beams and the like. 1,745,334. H. Bammann, Sorau N. L., Germany.

RING and doubler for use in certain doubling and like operations upon yarns. 1,744,202. J. Bancroft, Accrington, England. Assigned one-half to Howard and Bullough, Ltd., Accrington, Lancaster, England.

TEXTILE machinery, apparatus for making jaquard cards for. 1,745,019. A. Korn, Berlin-Charlottenburg, Germany. Assigned to C. L. Aktiengesellschaft, Berlin-Tempelhof, Germany.

Pickard to Hold Conferences in New York

The Department of Commerce has recently adopted a policy of having the chiefs of the commodity divisions of the Bureau of Foreign and Domestic Commerce at Washington visit the New York office of the bureau for the purpose of meeting representatives of various industries in order that a closer relationship may be established between industry and governmental agencies. Several of these conferences have been held, with mutually beneficial results to the trade and the department.

Following this policy, E. T. Pickard, chief of the Textile Division, will be in New York on Wednesday, Mar. 12, and will be available for conferences on that day. This occasion should afford a splendid opportunity to the textile industry and trade to confer with Mr. Pickard on matters in which the department may be of assistance. Exporters in particular should find it advantageous to discuss export markets and problems with Mr. Pickard.

Appointments with Mr. Pickard may be arranged by calling Mr. Mack, the department's textile representative in New York, at Whitehall 3660. All conferences will be held at the local offices of the Bureau, 734 Customhouse.

Warner J. Steel Appoints New Sales Agents

Warner J. Steel, Bristol, Pa., spinner of worsted weaving and knitting yarns, Bradford system, has announced that Fry & Crawford, who have been his selling agents for many years, will not represent him after Feb. 28, 1930. Starting Mar. 1, 1930, yarns produced by Warner J. Steel will be sold by Joseph E. Duval, 308 Chestnut St., Philadelphia, in that market. J. H. Slutzkin, 300 Fourth Ave., New York, will act as sales representative for the New York territory and the trade in New England will be covered by E. Geoffrey Nathan, 69 Prentiss St., Boston, Mass.

Western Knitwear Ass'n Supports Outerwear Fund

A motion to support the special subscription fund which the National Knitted Outerwear Association is raising to finance its market extension work, was adopted Wednesday by the Western District Knitted Outerwear Association at a meeting in Milwaukee. Leaders of the industry declared that 1930 will show the biggest volume in recent years and expressed the belief that knit goods has been helped greatly because of the vogue for sportswear.

September Silk $4.24 Sets Exchange Low Record

Record new lows were reached on nine positions on the National Raw Silk Exchange Tuesday, on a turnover of 2,460 bales for the day. Both the nearby and distant positions were affected. September raw silk sold at $4.24 per pound, which was the lowest price in the history of the Exchange. On other positions, declines averaging 6 points for the day were registered.

Use Research in Selling, Dr. Klein Urges Cotton Men

Speaking before a group of representative southern business men, textile executives and bankers, at a luncheon in Charlotte, N. C., Feb. 24, Dr. Julius Klein, assistant Secretary of Commerce, declared that attempts to solve the problem of economic distribution of cotton goods must be predicated on factual data, developed through organized market research, which should include every economic factor connected with marketing.

Not only should the textile manufacturer know the costs incident to the distribution of his products, but also he should be thoroughly acquainted with markets in which his goods are sold, with the customs and habits of the ultimate consumers of his products, and with general economic conditions prevailing in those geographical areas in which his goods are distributed, Dr. Klein continued. The forthcoming census of distribution, he said, will undoubtedly develop information which will prove of immense value to cotton manufacturers in the establishment of their sales or distribution policies.

Dr. Klein pointed out that different regions of the country have their distinctive economic problems, citing the importance of cotton and naval stores in the southern states, that of fruits and the salmon fisheries in the Pacific Northwest, grain in the Middle West, and manufacturing in New England. He explained that the Department of Commerce is now engaged in making comprehensive analyses of these separate economic regions.

Stressing the importance of what was termed "regional consciousness," Dr. Klein referred to the achievements of the New England Council, an organization of business men of the six New England states, which has stimulated the interest of New England manufacturers in the use of research methods in solving their individual business problems, and has brought about the formation of groups of competing manufacturers who are now carrying on joint cooperative research studies in relation to their industries.

The importance of cultivating foreign markets was emphasized, and Dr. Klein pointed to the increase last year in our exports of cotton textiles, which were 20 million square yards more than in 1928. Dr. Klein added that mill owners could further accelerate the development of export business by displaying more interest in this phase of their marketing activities and not leave the matter so largely in the hands of their selling agents.

C. Grant Isaacs, manager of the Charlotte office of the Bureau of Foreign and Domestic Commerce, had charge of the luncheon arrangements.

Business News

Says New FF Hosiery Group Will Cooperate

The plan of the Philadelphia Textile Manufacturers' Association for the organization of a national body of full-fashioned hosiery manufacturers, was a chief topic of interest in the hosiery market this week. The new group is to be made up of mills in five districts, as previously announced, and five manufacturers from each district were understood to have attended a meeting at the Roosevelt Hotel, New York, on Feb. 21. The meeting was under the auspices of C. Marlin Bell, manager-director of the Philadelphia Textile Manufacturers' Association. Mr. Bell refused to disclose what happened at the meeting, but said that another meeting would be held shortly to complete the organization plans.

It was reported five manufacturers had been appointed a committee to send out a trade questionnaire soliciting opinions regarding forming a national association.

One member of the group who was interviewed subsequently said the new group would not compete "in any way" with the National Association of Hosiery and Underwear Manufacturers, which at present represents the majority of the full-fashioned hosiery manufacturers. The same man asserted that the aim of the new group was rather to cooperate with the National Association.

Advisory Committees Appointed on Print Cloths and Sheetings

Following a conference with T. M. Marchant and S. M. Beattie, recently elected chairmen of the Print Cloth and Narrow Sheetings Groups, respectively, in The Cotton-Textile Institute, George A. Sloan, president of the institute, on Feb. 25 announced the appointment of a print cloth advisory committee to consist of: T. M. Marchant, Greenville, S. C., chairman; J. Whitney Bowen, Fall River, Mass., vice-chairman; John A. Law, Spartanburg, S. C.; W. E. Winchester, New York, N. Y.; Aug. W. Smith, Greenville, S. C.; Emslie Nicholson, Union, S. C.; Geo. M. Wright, Great Falls, S. C.; J. P. Gossett, Williamston, S. C.; W. B. Cole, Rockingham, N. C.; H. A. Ligon, Spartanburg, S. C.; L. O. Hammett, Honea Path, S. C.; E. F. Woodside, Greenville, S. C.; Walter S. Montgomery, Gaffney, S. C., and Rignal W. Baldwin, Baltimore, Md.

Mr. Sloan has similarly announced the appointment of a narrow sheetings advisory committee to consist of: S. M. Beattie, Piedmont, S. C., chairman; W. S. Nicholson, Union, S. C.; Alfred Moore, Wellford, S. C.; Lee Rodman, Cannelton, Ind.; Allen Johnson, Lynchburg, Va.; Col. F. B. Gordon, Columbus, Ga.; Victor Montgomery, Spartanburg, S. C., and H. F. Jones, Calhoun, Ga.

W. J. Vereen of Moultrie, Georgia, former chairman of the Narrow Sheetings Group, has been designated an honorary member of the narrow sheetings advisory committee.

Smith-Drum Open Office in Charlotte, N. C.

Smith, Drum & Co., Philadelphia, Pa., have announced the opening of a southern branch office in the Johnston Building, Charlotte, N. C. Beginning April 1, this office will be under the supervision of Robert D. Howerton, who joined the Smith-Drum organization recently. William C. Dodson, who has represented the concern in the southern territory for some time, will be transferred to the main office in Philadelphia where his services will be available to the industry in general. While making his home in Philadelphia, his new work will carry him periodically to all parts of the country, and it is expected that his friends in the South will continue to see him at reasonable intervals.

W. C. Dodson

Mr. Howerton is a graduate of Washington & Lee University in chemistry, and gained a more comprehensive knowledge of dyestuffs and their application while with the National Aniline & Chemical Co., and the Durham Hosiery Mills. For the last few years he has been engaged in research work for the Celanese Corp.

Otto Seyfert, Knitting Machine Maker, Visiting this Country

Otto Seyfert of Seyfert & Donner, Chemnitz, Germany, manufacturers of high-speed, full-fashioned hosiery machines, arrived in New York recently to confer with Robert Reiner, Inc., the American selling agent of the firm. Mr. Seyfert expects to remain about two weeks.

Although not many of these new machines are running in this country yet, deliveries have started to some of the most prominent hosiery manufacturers.

The Seyfert & Donner firm have lately taken a number of orders on 48-gauge machines for delivery in France and Spain. Robert Reiner, Inc., offices are in Weehawken, N. J.

Two Butterworth Executives

As reported in these columns on Feb. 15 H. W. Butterworth & Sons Co., manufacturers of textile finishing machinery, Philadelphia, have placed all sales activities under the direction of J. Ebert Butterworth, vice-president of the company.

J. Hill Zahn, who, with Mr. Butterworth, has been responsible for the Butterworth representation in the South, has been made manager of the southern office at Charlotte, N. C.

J. Ebert Butterworth

J. Hill Zahn

M. F. Corin now Permutit's General Sales Manager

M. F. Corin, who for 14 years has been Philadelphia district sales manager for the Permutit Co., manufacturers of water treating equipment, has been appointed general sales manager.

He will have supervision over 19 branch sales offices throughout the United States, and numerous sales agencies in foreign countries. He assumed his new duties at the Permutit Co.'s main office in New York in February.

V. M. Montgomery Elected to Head Standard Looms, Inc.

Standard Looms, Inc., Spartanburg, S. C., at a meeting of the board of directors Feb. 22, elected Victor M. Montgomery, prominent mill executive, as president, and Capt. H. D. Leonard, who was formerly chief engineer of Pacific Mills, as treasurer and general manager. One of the directors stated that the outlook for the concern during 1930 was very encouraging.

E. & F. King & Co., Inc., to Represent General Chemical Co.

E. & F. King & Co., Inc., Boston, Mass., have become distributors for the General Chemical Co. Their territory will comprise Maine, New Hampshire, Vermont, and all of Massachusetts except Bristol County.

The fact that E. & F. King & Co., Inc., are also distributors of the products of the Michigan Alkali Co. enables them to offer a complete line of acids, alkalis, and all industrial heavy chemicals.

Cutler-Hammer Appoints F. J. Burd District Manager for Philadelphia

Effective Feb. 1, Frank J. Burd became manager of the Philadelphia office for Cutler-Hammer, Inc., manufacturers of electrical control apparatus, with main office at Milwaukee, Wis. Mr. Burd replaces T. E. Beddoe, who has resigned.

A specialist in motor control engineering, Mr. Burd is well qualified for his new position. He has been with Cutler-Hammer continuously for the last 30 years with the exception of two years during the war period when he was electrical engineer for the Midvale Steel & Ordinance Co. at Johnstown, Pa. Mr. Burd was formerly stationed at Chicago where he has been in charge of the steel mill division for the last nine and one-half years.

Moeller Instrument Co. Succeeds A. E. Moeller Co.

A. E. Moeller Co., industrial thermometers, Brooklyn, N. Y., has been succeeded by the Moeller Instrument Co., Inc., as of Feb. 1. The active ownership and management will remain the same as for many years past under the following personnel: Charles E. Moeller, president and general manager; Max E. Moeller, vice-president and head of research department; Curt F. Moeller, treasurer and factory manager; Paul G. Moeller, secretary and charge of sales department; Otto J. Moeller, assistant treasurer and glass production department; Walter G. Moeller, production department.